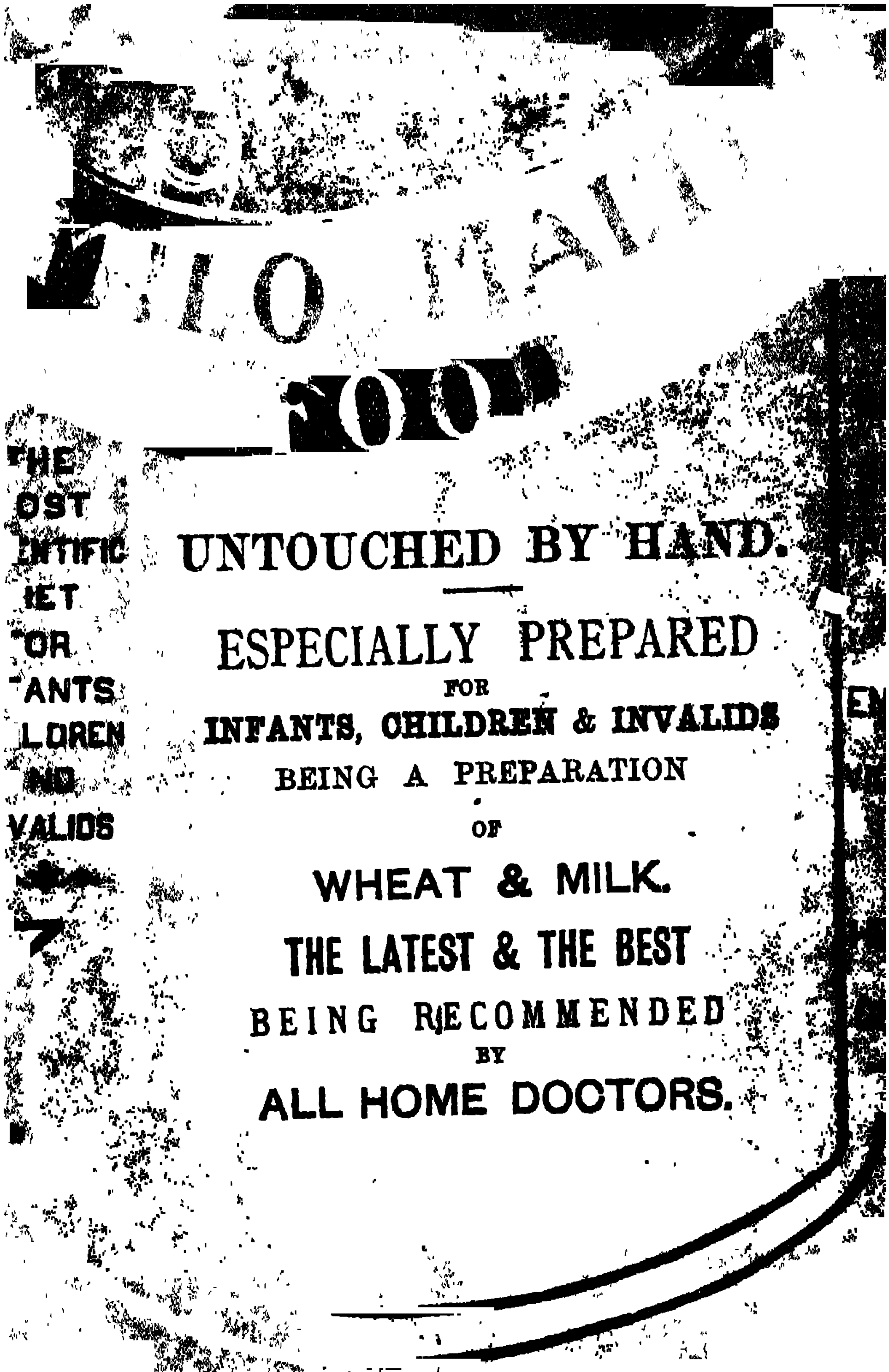

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The events connected with homœopathy during the past year ran a smooth course without disturbance. In India, its life was dull and prosaic without difficulty. There were fresh conquests but the encroachment was gradual and surreptitious. The knowledge of homœopathy imparted by the Indian schools and in general was of a common place and most of the recipients have not the power to understand the science of homœopathy. The practice of homœopathy is surely spreading but scientific homœopathy is losing ground. The old idea of infinitesimal dilutions still prevails. Notwithstanding the efforts of Dr. P. Jousset and others to impart a new light to the action of homœopathic dilutions, the old ignorance yet remains. There is a wide gulf between the old and the new. The old is based on the theory of solutions as all matters are finally dissolved. The new on the basis of recent scientific exposition holds the doctrine that matters and their infinitesimal ions are not dissolvable but they are divisible. The dilutions divide them in unequal proportion. No two dilutions can be perfectly equal containing the same number of ions. The difference in their number is not so much as to constitute a difference in their physiological or therapeutic action. The medicinal action depends on the ionic energy of drugs. The quantity of ions in each element are not equal. Their numbers differ in different elements. The action of drugs depends on the particular nature of the ions in each element and also on their number. These are the fundamental notions which help to understand the action of homœopathic medicines.

The revolution of our notion with regard to the scientific action of medicine has created wide chasm between the old and the new theories. Since the days of Hahnemann, science has made such a rapid stride that it has become impossible to explain the action of homœopathic medicines in any other light except with the help of the ionic theory. The corpuscular action of homœopathic medicines has made it relevant to understand the ionic or corpuscular action of our organs. For these reasons, a scientific homœopathist must be a different man from a symptomatologist without any positive knowledge of the action of human organs and their pathological condition. Diagnosis of a disease with its particular dangers can only be the sure guide to relief or cure. The microscopic neurons and centrosomes can be helped by the ions of medicines. The microscopic bacilli can be prevented from action by the infinitesimal ions. The microscopically diseased structure wants similar ionic medicines to check its ravages. Of course, our action should be to specialise our medicines for specialised diseases. Common platitude of symptomatological relations, as is generally understood, can not help us in the minute research of scientific medicine.

It is evident that in our fresh invasion, we should be prepared with armaments of modern structure. Surely, the homœopathic law is as old as the days of the sage Varadwaj, but homœopathy must be dressed in a new garb according to the exigency of the situation created by the new sciences in a new age.

The evidence of the progress of homœopathy in this light is manifest in Europe and America. The evolution of homœopathy of a century is evident in those countries; but in India, the progress of scientific homœopathy is so slow that we are reluctant to admit the truth that it is almost at a stasis. Progressive science wants the theory and practice of medicine to follow it in that pace. The days of atoms are gone. We now deal with electrons, ions, neurons, etc. The fine action of homœopathic corpuscles is displayed in the rapid march of the infinitesimals.

In order to understand the definite action of homœopathic medicines, we must resort to the ionic theory. Professor R. K. Duncan of America thus writes after describing the experiment to find out the action of ions: "So far, we learn that not only a hot wire as well as a candle flame constitute an electric battery, but that these gaseous ions, which pass from the wire to the plate need not necessarily convey both kinds of electricity, but may convey one kind only, that kind being *positive.* At this stage of the experiment, then, and while the wire is still hot, pump out the air within the vessel, which, it must be remembered, has so far been at the pressure of the atmosphere. At first, little change will be noticed in the positive charge upon the metal plate; but as the exhaustion proceeds, at a certain point, depending upon the temperature of the wire, the sign of the electricity upon the plate changes. It is now negative, not positive; and when almost all the air—but not quite all—has been pumped out of the vessel, this negative charge may reach high value.

We learn by this that the gaseous ions comprise particles of two kinds, one carrying positive electricity and the other negative; and we are now in a position to understand why the positive charge on the plate decreased as the temperature rose above a certain point. It was obviously because at a certain temperature negative particles began to be evolved as well as positive, and that flying side by side with the positive particles from the wire to the plate, they tended to neutralize their effect. Thus, a low temperature and a high pressure are favorable to the production of positive ions; and conversely, high temperature and a low pressure are favorable to the production of negative ions.

These negative particles, or ions, owing to the importance they have developed, are given a special name. They are called *corpuscles*."

As to the speed of the corpuscles, the velocity "is simply prodigious. The speed of the swiftest rifle bullet is insignificant in comparison. Their velocity is not at all constant, for it depends on the electric force with which they are charged, and upon the amount of air left in the vessel; but the corpuscle that does not travel with a speed a thousand times that of the swiftest cannon ball, which is two thousand miles an hour is slow indeed. The only velocity with which the speed of corpuscles can be compared is that of light—186,000 miles a second—and corpuscles have been observed with about half this velocity. In fact, the velocity of a corpuscle, depending on the conditions, may be taken as anywhere from 10,000 to 90,000 miles a second."

We had many occasions to compare negative ions or corpuscles with the homœopathic infinitesimals. The high speed of the corpuscles may also be compared with their rapid action.

As to the size of the corpuscles it can be said that they are "*thousand times smaller than the smallest atom.*" The other fact observed is that "*these particles are all alike in nature and size.* And finally we know that *they constitute an actual part of the forms of matter from which they fly.*"

It can be asked, what relation homœopathy has with these negative ions or corpuscles? The answer is short and decisive. As all the elements of nature contain ionic activity and as from them most of the homœopathic medicines are prepared, therefore the homœopathic medicines owe their vigorous energy to the ionic activity of the elements or their compounds. From non-metals and metals and their compounds all medicines are derived. From Hydrogen having sp. gr. of 1.008 to Uranium with sp. gr. of 239; we have the source of medicine; then how can we ignore their ionic energy when they display the material force.

After all, our so-called vitality is not an immaterial, subtle and psychic force but it is the material energy of ions which constitutes a living body. The ionic force comes from the millions of centrosomes of all structure belonging to animal or plant life. The ions themselves are matters and their force pervade the universe. The so-called ether is a material body and not an immaterial energy as has been supposed by Lord Kelvin.

The outcome of all our present knowledge is that there are infinitesimally small particles which according to their quality and quantity produce various manifestations of force. The action of homœopathic medicines comes within the range of that energy. It comes as a surprise to the gross intellect of the *Lancet* that infinitesimally small particles have any power. In its issue of November 23, the following remarks occur: "We know what infinitesimally small quantities of certain substances will put an end to the great vital processes and we know also how endless appears to be the action of the enzymes or ferments which render food assimilable so that the same vital processes are sustained. A thirtieth part of a grain of aconitine will kill the human organism, one part of an enzyme will transform 100,000 parts of cane sugar into invert sugar, the enzyme of malt will convert a thousand times of its weight of starch into sugar, and so forth. Nor is the enormous action of infinitesimally small quantities confined to the organic or organised world. Even certain materials devoid of life are found to exert a similar action. Platinum, for example, in the colloidal state is capable of decomposing 1,000,000 times its weight of hydrogen peroxide into water and oxygen and then of remaining as strong and as active as ever. Perhaps the most remarkable fact in connection with the extraordinary 'vitality' of colloidal platinum is that the energies are at once paralysed by such ordinary animal poisons as prussic acid, corrosive sublimate, or sulphuretted hydrogen. The platinum may thus be said to be poisoned and such a small quantity as one—millionth of a grain of prussic acid is sufficient to prevent this great transforming power.

To give another example of the decided effect of minute traces of various substances it has been found that certain water organisms are destroyed in water contained in a copper vessel and yet the quantity of copper present is only one part in a thousand million parts of water. Such effects are impressive and they are calculated to impress us still more when we contemplate the number of processes going on in the human machine which are dependent upon the action of small things. The great processes of oxidation depend upon small things; the small amount of iron in the hæmoglobin probably controls its great oxygen-carrying property. The minute amount of arsenic and iodine in the thyroid gland probably plays a role of great importance; the enzymes are mighty and the atom also."

Our contemporary of the old school has been gradually conforming his ideas to the infinitesimal power. Like him, some of his colleagues believed the law of *Similia Similibus.* They could not find their way to understand the infinitesimal doses. Now, it has so happened that many of them can understand both the principles. They avow their faith in them but hesitate to practise the homœopathic system.

The *Lancet* yet adheres to atoms. To conceive ions is a great leap for him. We have hope that gross conceptions will give way to refined ideas.

Last of all, it is desirable to enter into the question of vital principle. Lord Kelvin said: "That modern biologists are coming once more to a firm acceptance of something, and that is—a vital principle." Sir E. Ray Lankester wrote in the *Times,* May 17th, 1903, as follows:

"Lastly, with reference to Lord Kelvin's statement that 'modern biologists are coming once more to a firm acceptance of something—and that is a vital principle. I will not venture to doubt that Lord Kelvin has such persons among his acquaintance. On the other hand, I feel some confidence in stating that a more extensive acquaintance with modern biologists would have led Lord Kelvin to perceive that those whom he cites are but a trifling percentage of the whole. I do not myself know of any one of admitted leadership among modern biologists who is showing signs of 'coming to a belief in the existence of a vital principle.'

Biologists were, not many years ago, so terribly hampered by these hypothetical entities—'vitality,' 'vital spirits,' 'anima animans,' 'archetypes,' 'vis medicatrix,' 'providential artifice,' and others which I can not now enumerate—that they are very shy of setting any of them up again. Physicists, on the other hand, seem to have got on very well with their problematic entities, their 'atoms' and 'ether,' and 'the sorting demon of Maxwell.' Hence, perhaps, Lord Kelvin offers to us, with a light heart, the hypothesis of a 'vital principle' to smooth over some of our admitted difficulties. On the other hand, we biologists, knowing the paralysing influence of such hypotheses in the past, are as unwilling to have anything to do with 'a vital principle,' even though Lord Kelvin erroneously thinks we are coming to it, as we are to accept other strange 'entities' pressed upon us by other physicists of a modern and singularly adventurous type. Modern biologists (I am glad to be able to affirm) do not accept the hypothesis 'telepathy' advocated by Sir Oliver Lodge, nor that of the intrusions of disembodied spirits pressed upon them by others of the same school.

We biologists take no stock in these mysterious entities. We think it a mere helpful method to be patient and to seek by observation of, and experiment with, the phenomena of growth and development to trace the evolution of life and of living things without the facile and sterile hypothesis of a vital principle? Similarly, we seek by the study of cerebral disease to trace the genesis of the phenomena which are supposed by some physicists who have strayed into biological fields to justify them in announcing the 'discovery' of 'telepathy' and belief in ghosts."

As sciences are advancing in taking up an exact attitude, it will be our duty to place homœopathy among these exact sciences, by abandoning useless and unexact words. We can not adhere any more to words which do not convey precise meaning.

SUPPURATION.

(Continued from p. 488).

Hydrastis can limit suppuration in bad ulcers and change the fœtid smell of the pus. Offensive ulcers, bed sores and chronic ulcers have been cured by the remedy. At present we are not interested in the nature of the ulcer which requires Hydrastis. The symptom of offensive pus is the only indication in suppuration.

Kali Arsenicosum seems to have many properties of Arsenicum. It has never been used in suppuration. It can be said that in chronic suppuration with emaciation it may prove efficacious. In phagedenic ulcers with deep base and turned up edges it has proved curative.

Kali Bichromicum has the following symptoms: small pustules on roots of nails, spreading over hands and wrist; arm became red and axillary gland suppurated. It has been used in punched out, perforating ulcers on either skin, mucous membrane or bone.

Kali Iodatum is generally considered an anti-syphilitic medicine. In that capacity it may be used in cases of syphilitic suppuration and ulceration.

Lachesis has the following symptoms: *Sore spots become fungoid, dark red to brownish,* with white spots, burning on wiping. *The brownish, red areola about the ulcer became blackish blue.* Old red ulcer scars reopened. Suppuration after a blow, the vesicles and epidermis loosened about them, the open spots were dark red, looking like a flat sponge. Bleeding of ulcers which then became cleaner. Ulcers bleed readily.

Hempel and Arndt remark: "Malignant boils, pustules and ulcers on various parts of the body, with much pain, unhealthy granulations, secretion of thin, bad pus; destruction of the deep seated tissue; bluish-black appearance of the margin of the sore and of the surrounding tissue; sallow, cachectic appearance of the face; suspicion of syphilitic taint. If on the leg, varicose condition of the limb is often present. Great prostration." Allen has the following: "Tendency to echymosis, to bed sores. Indolent ulcers, with bluish purple color. Carbuncles. Varicose ulcers. Various forms of pustular eruptions, which suppurate and become bluish black." Clarke says: "Ulcer sensitive to least touch. Small ulcers surrounding larger."

The clear indication of Lachesis is in phagedenic sores, either from syphilis or other causes. In traumatic injury it holds a valuable place. Poisoned wounds, leading to gangrene, which count many deaths, may be cured by the instant administration of the medicament. Indeed, Lachesis holds a high place in many cases where grave symptoms appear.

Malandrinum is used in bad effects of vaccination. Any suppuration from that cause may require the use of the medicine. The principal indications are the high fever and the excessive bad appearance of the ulcers. In some kinds of vaccination abscesses form at the end of the infection.

Manganum has suppuration of skin round joints. It is doubtful if it has been used for that purpose.

Mentha Piperita produces sore from every scratch. It is a remedy of unhealthy skins and can be so used like its allies.

Mercurius has the following symptoms: *swelling of the prepuce as if distended with air or water to a blister; swelling with inflamed redness of the inner surface of the prepuce with sensitiveness; in the glans under prepuce, red vesicles, becoming ulcers, with discharge of offensive yellow or white matter, staining the shirt, then the large ulcers bleed, and on touch pain affecting the whole body, they have round margins, everted like raw meat, caseous coat on bases; on fore part and one side vesicles eating deeply and spreading; small white vesicle, which also ooze a fluid;* inflamed swelling in the vagina as if raw and sore; red and shining inflammatory swellings; inflammations ending in exudation and suppuration; cellulitis with lumpiness in any region, periostitis then necrosis; sufferings worse at night; profuse sweat with no relief; *Mercurius* is rarely indicated when the tongue is dry.

Mercury in many forms has frequently been used to check suppuration. It is also considered applicable in inflammation and ulceration. In actual suppuration it is considered beyond the province of the remedy. On the other hand, it is supposed that if it cannot subside inflammation, the medicine has the power to hasten suppuration. So it seems that Mercury rarely possesses the power to limit the suppurative process. It has been found that by the use of Mercury, inflammations end in exudation and suppuration. It is difficult to decide one way or the other, whether Mercury has the power to limit suppuration when it has taken place? There are so many salts of Mercury and their actions being so much unequal it is not possible that all of them should possess the power to oppose suppuration or limit it. It has been found that Mercurius solubilis or Mercurius vivus has the power in higher dilutions to absorb suppuration, if it has taken place in very small quantity. The effect is manifest in internal abscesses as illiac, psoas, etc. In abscess of the liver the checking influence has also been observed. Hoyne has suggested its use in pyæmia. On the whole, it can be said that Mercurius solubilis or Mercurius vivus can be internally used in abscess even when suppuration has possibly taken place. The analogical fact with regard to the use of Mercurius in hydrocephalus has some bearing on the point. The medicine can absorb the hydrocephalic fluid. It stands to reason that Mercurius can also absorb the serous exudation connected with small collection of pus in an abscess. It is worth a trial to use the medicine when suppuration has come. We are of definite opinion that Mercurius has power to favour absorption.

Clarke says: "Another great feature of *Merc.*, almost constituting a keynote, is the tendency to the formation of pus. In the suppurative stage of small-pox it is specific. Flow of pus, from any orifice calls for *Merc.* Pus forms in cavities in abscesses, which burn and sting. Discharges are yellow green in colour. ... *Merc.* is a great solvent; it dissolves metals out of their ores and it dissolves living tissues, inducing excessive emaciation. Lowly organised tissues as indurations, exostoses, and some tumours are melted first. Oedema and dropsies are absorbed; rheumatic swellings. If the doses of *Merc.* are large and dropsies disappear rapidly under them, the tissues themselves may disappear also in offensive, rapidly decomposing ulcers. The bones soften so that they will bend. Whilst *Merc.* intensifies the action of the absorbents, it may also paralyse them, hence enlargement of glands, with pricking pains, inflammation, suppuration."

Mezereum has the following symptoms with regard to inflammation and suppuration: Inflammation of a fresh wound (on knee), with burning and with intermittent stitches extending into legs; boils on face, *ulcers on bony protuberance; ulcers covered with thick whitish-yellow scales, under which thick yellow pus collects; itching and burning vesicles around the ulcers;* ulcers, with an areola, sensitive and easily bleeding when removing the linen, which sticks, painful at night; the pus tends to form an adherent scale, under which a quantity of pus collects burning and stinging with inflammation.

Allen has the following remarks: "It produces violent inflammation of all mucous membranes and of the skin; internally the inflammation is characterised by burning, externally by violent itching. In addition, its neuralgias are very marked, they attack principally the face, but occasionally other parts. The periosteum of the jaw and the long bones become the seat of an inflammatory process which is followed by its legitimate results." Clarke says: "*Mez.* affects the long bones more markedly than others, and the least touch is intolerable, but it has, like *Merc.*, a strong affinity for the facial bones and teeth."

Mezereum is more a medicine of the mucous membrane, and the long bones. Inflammation, suppuration or ulceration occur ring in them is expected to have marked effect. In syphilitic abscess it has proved efficacious in restraining suppuration.

Muriaticum Acidum is a medicine for unhealthy, putrid, and burning ulcers where there is much suppuration or exudation of thin fœtid pus.

Nitricum Acidum is generally used in syphilitic, carious, and mercurial ulcers; complaints arising from punctured wounds; boil in groin with sticking itching in its indurated part; wounds and ulcers with lancinations as by splinters, or with burning pains (especially when they are touched, and which bleed easily; inflammation and painful sensitiveness of the bones; inflammation, swelling and suppuration of glands; ulceration of bones; ulcers with sanious, sanguineous and corrosive suppuration; caries and necrosis; pains in old scars on change of weather.

Nitric Acid is generally used in syphilitic suppuration and ulceration. Allen suggests its use in ulcers and eruptions which bleed easily when touched.

Paeonia has *painful ulcer, oozing offensive moisture on perineum near anus;* sensitive ulcers on lower part of the body.

Allen has the following clinical note: "Abscess below the coccyx. Obstinate ulcer on the jaw. Ulcer right instep from blistering the foot. Large ulcer on lower part of leg. Ulcer on the breast of an old lady, from an abscess which had never healed."

Allen writes: "One of the symptoms of the proving is this: 'A small ulcer on perinaeum near anus that constantly oozes very offensive moisture; painful for eight days.' This symptom has been expanded by clinical observation, principally Ozanam's, into ulceration in general, ulcers from pressure, as bed sores, and from ill-fitting boots..... The ulcers are the seat of severe shooting pains."

(*To be continued*).

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

For the Month of December, 1907.

Date.	Barometer.	WIND.		TEMPERATURE.		Humidity.	CLOUD.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·992	E	1·1	82·5	68·5	68	6	*Nil*
2	29·984	N	3·7	82·8	65·5	77	8	,,
3	29·945	N	4·9	79·5	61·2	55	*Nil*	,,
4	29·964	N	2·9	77·0	59·5	67	,,	,,
5	30·006	N	4·2	78·2	59·2	83	,,	,,
6	29·994	N	2·4	79·0	61·0	78	,,	,,
7	29·981	E	1·3	78·5	61·2	71	,,	,,
8	29·967	N	1·5	79·8	64·0	70	5	,,
9	30·038	N E	3·1	81·2	67·0	61	7	,,
10	30·046	E N E	2·4	80·5	67·0	67	7	,,
11	30·095	N E	4·2	81·0	64·0	60	7	,,
12	30·057	N E	4·2	78·0	61·5	83	10	0·12
13	30·028	N	4·1	68·0	58·0	89	*Nil*	0·41
14	30·076	N	2·3	71·5	60·0	89	,,	*Nil*
15	30·024	N	4·5	73·2	58·8	83	,,	,,
16	30·025	N	2·5	73·2	59·2	83	,,	,,
17	30·056	N	2·0	74·0	59·0	73	3	,,
18	30·068	N	2·2	73·5	59·0	72	*Nil*	,,
19	30·012	N	2·6	74·0	58·5	77	,,	,,
20	30·036	N	1·6	74·0	59·0	77	,,	,,
21	30·028	Calm	1·1	74·0	59·0	88	,,	,,
22	30·042	N	2·5	73·8	56·8	88	,,	,,
23	30.100	N	3·9	73·2	59·0	83	,,	,,
24	30·092	Calm	2·5	75·0	59·0	75	,,	,,
25	30·046	E	2·6	76·0	58·8	59	,,	,,
26	30·098	N	1·7	74·8	55·2	69	,,	,,
27	30·044	N	2·5	73·0	57·0	65	,,	,,
28	30·065	N	3·4	73·5	57·2	70	,,	,,
29	30·094	E	3·2	75·8	59·0	72	,,	,,
30	30·054	N	2·2	75·8	59·8	78	,,	,,
31	30·044	N E	2·0	76·0	59·8	68	,,	,,
Mean	30·032	N E	2·7	76·1	60·4	74	2	TOTAL. 0·53

Remarks: The mean atmospheric pressure of the month of December was 30·032. It will be seen that the atmospheric pressure was gradually increasing. In the month of November it had been 29·976. The mean direction of wind was N. E. The mean velocity was 2·7 miles per hour. The mean maximum temperature was 76·1 and the mean minimum 60·4, shewing gradual fall of temperature. The mean difference between them was 15·7 as in the last month. The mean humidity was 74. The total rainfall was 0·53; its absence during the month of November was marked.

The sudden rise of the mortality of cholera in the month of November was a noticeable feature. During the week ending the 30th November it was 143. During the week ending the 7th December it was 119. In the week ending the 14th December it was 116. In the week ending the 21st December it was 51, shewing a sudden decline. In the week ending the 28th December it came down to 40.

Mortality from plague was gradually increasing. During the week ending the 30th November it was 18. In the week ending the 7th December it was 21. In the week ending the 14th December it was 27. In the week ending the 21st December it was 48 and in the week ending the 28th December it was 14.

Deaths from smallpox were shewing slight increase. The lowest mortality was 2 and the highest 6 in a week.

As usual fever counted many deaths. In the week ending the 30th November the mortality was 196. During the week ending the 7th December it was 176. In the week ending the 14th December it was 220. In the week ending the 21st December it came down to 182 and in the week ending the 28th December it was 147.

Deaths from bowel complaints ranged from 89 to 103.

The total number of deaths were 3049. During the four weeks the mortality was 817, 847, 743 and 642. The ratio of deaths during the period was 46·65 per mille.

It will be interesting to take a brief survey of the meteorological occurrences and the mortality of the town of Calcutta during the year 1907.

The mean atmospheric pressure in January was 29·996. In February 29·996. March 29·947. April 29·808. May 29·692. June 29·507. July 29·554. August 29·509. September 29·684. October 29·842. November 29·976, and in December 30·032. The steady decline from January to June, and the gradual increase from July to December are noticeable facts.

The mean direction of wind in January was N. W. February N. E. March E. S. E. April S. S. W. May S. E. June E. S. E. July S. S. E. August S. E. September S. E. October S. S. E. November N. N. E., and in December N. E. The gradual change from the south wind in March to the north wind in November is clearly observed.

The mean velocity of the wind per hour in miles in January was 2·2. February 2·8. March 3·1. April 3·5. May 3·7. June 6·1. July 4·2. August 3·9. September 2·5. October 2. November 1·6, and in December 2·7. The lowest velocity was in November and the highest in June.

The mean maximum temperature in January was 78·3 degrees. February 80·9. March 86·7. April 93·8. May 97·6. June 94·2. July 92·4. August 90·2. September 90·6. October 90·5. November 84, and in December 76·1. The highest mean maximum was in May and the lowest mean maximum in December. We clearly see how the inclination of the sun to the tropics of cancer and capricorn affects the temperature.

The mean minimum temperature in January was 62. February 64·7 March 69·9. April 75·9. May 79·1. June 80. July 80·7. August 80·1. September 79·7. October 79·3. November 68·3, and in December 60·4. The highest mean minimum was in July and the lowest mean minimum was in December. The noticeable fact is that the highest mean maximum happened in May but the highest mean minimum took place in July. The lowest mean maximum and minimum temperatures occurred in December.

The year had scanty rainfall. In January nil. February 0·61 inches. March 3·40. April 1·55. May 4·30. June 17·67.

July 9·03. August 10·08. September 10·43 October 0·47 November nil, and in December 0·53.

The highest mortality from cholera was in January. The highest mortality from plague was in April. The highest mortality from fever was in the month of December.

The ratio of death per thousand population in January was 48·52. February 36·57. March 38·0. April 52·82. May 40·78 June 25·7. July 24·05. August 25·48. September 27·8. October 32·4. November 45·55 and in December 16·65. The highest mortality from all causes was in April and the lowest in July. The mortality gradually rises from August, perhaps, to culminate in the highest figure in April.

EDITOR'S NOTES.

The Institute of St. Petersburg Corporation of Medical Men.

The *Lancet*, December 14, writes:

"The *Novoe Vremya* has an interesting note on the history of the Institute of St. Petersburg Croporation of Medical Men, saying that during the outbreak of scarlet fever and diphtheria 25 years ago this institute was formed with 16 medical men, which number during the 25 years of its existence has been increased to 36. Their duties are to attend professionally the poor of the town afflicted with infectious diseases. In these 25 years these medical men have attended 5,000,000 cases free of charge. The journal closes the notice with a list of the six survivors of the original members."

Russia has given birth to eminent scientific men and women. Mendeleeff may be stated to be the Newton of chemistry. His periodic law has revolutionised chemistry. Metchnikoff famous for his phagocytic theory stands pre-eminent in biology. He is followed by Pavloff whose work on digestion has attained a high fame. Madam Klumpkoff as an astronomer has a wide reputation. Madam Currie of the radium fame is lustrous like the metal of her discovery. Now we hear of the Corporation of Medical Men doing invaluable work for relieving patients during an epidemic, shewing a model to all races of mankind. Even for these grand achievements, Russia is barbarous in the eyes of the rest of Europe. India should follow Russia in the cause of suffering humanity.

The Statue and the Students.

The *British Medical Journal* of December 14, supplies us with the following information:

"We have already expressed our disapproval of the attempts made by some medical students to dethrone the statue of the 'brown dog' at Battersea from its pedestal, and we can only deplore the repetition of an offence against public order on the part of lads who should know better. The magistrate at Bow Street told the students who were brought before him that their proceedings were silly, and we quite agree with him. But sillier still is the fuss made by certain newspapers about the 'rioting' of a handful of boys. Silliest of all is the statue which is the source of the trouble. There are, it is to be presumed, some inhabitants of that cultured suburb, Battersea, who have the grace to be ashamed of a monument which, as was said of a more famous one, 'like some tall bully lifts its head and lies.' It was doubtless intended by the foolish folk who set it up as a defiance of the severe condemnation which the methods of certain antivivisectionist agitators met with from one of the highest public tribunals of this country, and it is a standing provocation to young men naturally high-spirited and proud of the profession which it is the business of these agitators to vilify. We have, however, too much confidence in the good sense of the bulk of medical students to believe that they look upon the effigy of the 'brown dog,' so far as they are aware of its existence, with any feeling but contempt, and we trust that there will be no more 'rioting.' The thing is not worth the martyrdom of even a small fine. The previous outburst was made the ground of various attacks on the medical profession in the press. The *Daily Graphic*, in a beautiful piece of what Oliver Wendell Homes calls 'bladdery bathos,' said: 'One would have supposed that, far from making the little brown dog an object of attack and ridicule, students with any respect for their profession would have regarded it as a humble creature that gave its life for the benefit of humanity, and would have treated its memory accordingly.' The *Morning Leader* published a letter to the following effect: 'The public have now before them a fine object lesson of the spirit of the men who are now being trained for our future doctors. Can they view with calm equanimity the agitation on the part of medical men for more power over the children, and over the poor of our land, while the students are possessed of the spirit of cruelty which this latest exhibition proves'? Beside these noble sentiments we place the following from the *Daily Chronicle* of December 11th : ' A student who fell or threw himself from the top of a tram was only slightly injured, and the crowd refusing him a passage to the hospital, he was taken to a neighbouring surgery, the people shouting, That's the brown dog's revenge.' The hospital in question appears from the context to have been the Antivivisectionist Hospital, and the action of the crowd who refused the injured man a passage may therefore have been prompted by benevolence. But the fine humanity of the people who shouted 'That's the brown dog's revenge' shows the moral effects of antivivisectionist agitation."

Feeling has been raised to a high pitch in the controversy of of vivisection. The anti-vivisectionists condemn the action of the vivisectionists and the vivisectionists are enraged at the interference of the other party. There may be necessity of vivisection but the occasion is rare. The procedure adopted by the vivisectionists to attach an unusual importance to vivisection is to speak the least a stupid business. The provings of homœopathic medicines and the examination of poisoned dead bodies serve the basis of a system of practical medicine which is far more important than the experiments on living animals. Vivisection cannot reveal the position of man differing from the lower animals in the demonstration of the physiological action of medicines. Comparative physiology may differentiate the action of the organs of the higher and the lower creatures. The successive gradation of man from the lower animals in that respect may be an interesting research but is, perhaps, destined to remain in the dark.

Treatment of Piles.

The *Homœopathic Recorder* of the 15th November has the undermentioned information :

"From a thorough article on piles and their treatment, in this journal we excerpt the part treating of the treatment, which is as follows :

The Homœopathic practitioner is not infrequently called to see a patient with piles, who does not know what to do for pains. A local examination will generally show as the cause that the turgid veins have been pressed through the sphincter and have become strangulated by its contraction, assuming thence a bluish-red appearance. The patient is tormented by an intolerable burning. We should in such a case first of all endeavor to reduce the strangulation, which can be best effected by allowing the patient to bend forward, and while he slowly raises up, the fingers, moistened with oil, should exert a moderate pressure upon the knot, which will then disappear inside the sphincter. There must be no violent means used. After the strangulation has been reduced a cold clyster should be cautiously administered, then a cold sit-bath and a cold ablution of the anus. Internally *Arsenicum* 3 should be given, a remedy which always has a brilliant effect. It should always be prescribed where there are burning pains, whether the knotted veins be inside or outside. *Arsenicum* is also useful as it prevents any gangrene of the strangulated parts. When the knots are turgid with blood, and the attack is accompanied with violent colicky pains *Belladonna* 3 should in addition be given. Inordinate itching of the knots calls for *Nux vom.* 3, also *Sulphur* 6. For checking any bleeding that may arise, *Hamamelis* extract is unexcelled. About ten drops may be taken every half hour or every hour, according to the severity of the case. The extract is said to cure mild cases even by itself, but I have not had any experience to substantiate this. After the application of cold water to the anus, *Hamamelis* cerate should be applied. We may also remark that the burning pains of internal piles are usually entirely removed by a clyster to which twenty drops of the extract have been added. Mucous piles seldom show burning pains. But they cause a troublesome sensation of pressure. In such cases the alternate use of *Carbo vegetabilis* and *Sulphur* is advisable. When there are pronounced suppurative products in the stool, there must have been an inexcusable lack of attention. In this case more than in others the most careful cleanliness is called for. *Hepar sulph.* or *Mercurius* should be given in such a case. Hæmorrhoidal troubles in pregnant women call for *Carbo veg.* 3; Belladonna in alternation with *Arnica* 3; *Collinsonia* may also be required.

So far we have chiefly had in view acute cases. In the chronic stage as a rule the same remedies should be applied, only the doses should be repeated at longer intervals. We would state in addition that in the constipation which almost always attends this trouble remedies like *Podophyllin*, 1, *Plumbum* or *Opium* will generally be required; *Lycopodium* should also be added to the list of remedies on account of the liver which is apt to be affected at the same time. And in conclusion: There should be a careful attention to the mouth. Hæmorrhoidal patients according to the law of polarity usually suffer from carious teeth and a bad odor from the mouth."

Many medicines are applicable according to the circumstance of cases in piles, and it is impossible to compress them in a short space. The medicines suggested are most prominent and they generally serve the useful purpose.

Broncho-Pneumonia.

The *Homœopathic Recorder*, November 15th, says:

"The proper treatment of the primary disease, measles, whooping-cough, diphtheria, common cold or whatever it may be, is the great preventive. Of course, at the head of the list of remedies stands *Antimonium tartaricum*. Its great suggestive symptom is filling up of the chest with inability to clear it. The sub-crepitant rales become smothered by accumulations of phlegm which provoke choking fits and cyanosis, so frequently seen in the aged and in anæmic children. Such individuals are sensitive to cold and may be more or less nauseated. A young mother is now and then mistaken in her child's symptoms. It has broncho-pneumonia, has been annoyed by a severe cough and has been rising sufficiently to admit of fairly good aeration in the lungs; but the cough stops abruptly and the child becomes drowsy. This stopping of the cough and stupidity she misconstrues as improvement. The doctor comes. He observes the cyanosis that is coming on; that the breathing is shallower and more frequent; a pulse previously fast and weak is only a faint but very rapid tremor under his sensitive fingers. He notes at once the lungs are filling up, the blood distributed to the too cool body is becoming more and more impure at every flickering heart-beat; the sleep is only the coma indicative of poisoning of the cerebral centres. In such a situation there are three things indicated, viz: *Antimonium tartaricum*, a steady nerve and persistent good care; these alone give the fighting chance.

My method of dispensing this remedy is to put a powder of the second or third decimal trituration in 3 ounces of water and to give a teaspoonful of the solution according to the condition of the patient.

It is not every case that becomes so much devitalized as those calling for *Tartar emetic.* Often-times the strength holds up fairly well and the cough is effective against the phlegm. Such have not suffered from depraved nutrition to begin with. They are worried down by the severity of the primary infection or have lapsed owing to indifference in treatment and care. They are not cachectic, only decidedly the worse for wear. *Ipecac.* is many times their remedy.

It has no antecedent dyscrasias. The rales are coarser than with *Antimonium tartaricum*, The cough may be spasmodic but keeps the bronchial net-work reasonably clear of the loose mucus. If there be nausea, we have an additional link in the chain of *Ipecac.* symptoms. *Sambucus* relieves spasmodic suffocative coughs, especially if the spasms are nocturnal. The cough is accompanied by rough sibilant wheezings and dyspnœa. It would seem to be indicated when the inflammation is just invading the pulmonary capillaries. My personal experience gives me great confidence in this remedy. I administer the tincture in water. *Squilla,* like *Bryonia,* has a cough with pleurisy-like pains in the side. There is dyspnœa, which, with the side-stitches, is developed by inspiration. Often indicated in the lingering and threatening bronchitis of measles. *Lycopodium* in lingering cases that do not tend to clear up, with a muco-purulent matter coughed up or, when in sub-acute cases there is fear of tuberculosis becoming engrafted, it is sometimes very effective. *Sanguinaria* should be also considered in such types. Of course good old *Bryonia* has an invitation now and then to help us out, but the stages of this drug are usually passed before the real lobular invasion develops. The same is true of *Ferrum phosphoricum.* But if a new lung territory becomes invaded it will probably be necessary to turn back to them. *Phosphorus,* which is so apt to have a 'stage' in lobar pneumonia, may also be indicated by incessant cough, scanty secretion when the pulmonic catarrh is predominating over the bronchial. Percussion brings out the dull sound and inspection detects the shallow rapid breathing. The blood-streaked mucus which results from the stripping off of bronchial epithelium by severe cough is always inquired about, but this symptom that is not possible in those who do not expectorate, is never obtainable in infants. It is possible for *Arsenicum, Rhus* and some of the other remedies that fringe on the border line of fever and the typhoid state, which sometimes gets to be the condition in protracted cases in elderly people, to be indicated. *Kali carbonicum* is an old person's remedy with its shivers and sticking pains through the chest. It is one of the 'old reliables.' I have sometimes referred to *Kali carbonicum* and *Senega* as the old man's bronchial friends."

The suggestion of Dr HINSDALE about *Ant. Tart.* is true to the point. The choking of the capillary tubes is not only due to the ineffective energy of the child but it is also the effect of the paralysis of the bronchial muscles. When there is resolution of the fine crepitation, then *Ipecac.* comes to our help. *Bryonia* is also of great service in facilitating the resolution when the use of *Ant. Tart.* is not urgent. *Squilla* in wheezing dyspnœa is necessary. *Phosphorus* is a medicine when capillary tubes are more or less affected. Other medicines are to be administered according to necessity.

Facial Neuralgia.

The *Homœopathic Recorder*, of the 15th November supplies us with the following notes of Dr. P. Jousset :

"In facial neuralgia there are two different forms, namely, the ordinary form, and the extremely painful form, which is connected with twitches and is also called 'tic douloureux' or 'Fothergill's face-ache.

The ordinary form of facial neuralgia calls for *Nux vomica* as the chief remedy. The action of this remedy is pretty sure, where the following symptoms are observed: Pains which follow the course of the upper branch of the trigeminus, and thus have their chief seat in the socket of the eyes and in the frontal region and which return in attacks beginning in the morning, increasing during the day in violence, disappearing in the evening; the pain is almost unendurable. *Nux vomica* in the 12 or even the 30 potency alleviates these attacks more surely than the *Sulphate* of *Quinine*, that is commonly used. I prescribe six pellets dissolved in 125 grams of water, of which solution one spoonful is taken a full half hour before dinner and another before going to bed. In the journal *'L'Art Medical'* I published a cure of an old man who had a gouty diathesis and was seventy years of age, with whom these attacks had been returning for more than a year, and who had been treated ineffectually with *Quinine* and had also spent some time in the mountains.

Aconite is indicated where the pain appears in the frontal branch of the trigeminus and shows one or more points which are painful on pressure, and also radiates into the temples and the vertex. A peculiar indication for *Aconitum* is the formication which always accompanies the pain and which is alleviated by violent rubbing. If the 6 or the 12 dilution should not suffice we would recommend a trial of the mother tincture (this is of course only permitted to the physician).

Spigelia is used more rarely than the first mentioned remedies. It should be considered when there is a pain in the eye-ball, as if it were being torn out or pressed into the eye-socket. *Belladonna, Chamomila* and *Gelsemium* may also be used in the ordinary form of facial pain.

Fothergill's pain of the face, or the tic douloureux, is a dreadful ailment, which offers an obstinate resistance to almost every kind of treatment, and in many cases it is incurable, and the excessive pains drive the patient almost to despair and at times even to suicide. The pains come on suddenly and last for several seconds or even a minute and then disappear again at once and totally. Trousseau and Gills de la Tourete treated these nerve-pains with immense doses of *Opium*; but the one as well as the other confesses that he never made a cure by such a dose. Cutting out the nerve which causes the pain, as a rule, only causes a transient relief of the pains and of the ailment. I myself am able to recommend a less hopeless treatment, which I will illustrate by the following case:

Mrs. X., sixty-eight years of age, spare-built and feeble, was sent to the Hospital of St. Jacques on the 1st of March to complete the cure of her pneumonia. The patient had for some time been suffering from attacks of tic douloureux, which ailment had so far resisted every kind of treatment. The attacks of pain came on when moving the jaws for the purpose of eating or of speaking. It was a penetrating pain, which darted like lightning through the left middle branch of the trigeminus (thus through the region of the cheek and the upper jaw); the patient would at once lay the hand on the painful spot in order to press upon it and would remain immovable in this position. During the attack the muscles of the side affected were in a cramp-like motion. The pains would last but a very brief time, but would return every day from ten to fifteen times.

On the 27th of March I prescribed for the patient *Thuja* 6 which remedy was given for four days. The consequence was a very considerable alleviation in the attacks. *Coccus cacti* 6 given for two days, remained without effect. On April 2, *Thuja* 3 was given, after which the attacks disappeared within four days. Two days later a relapse set in. After some doses of *Coccus cacti* 3 in the trituration, the attacks returned only two or three times a day, and in a much slighter degree. On the 12th of April the patient received again *Thuja* 3, on taking which, after four days, the attacks disappeared and did not return again. Nevertheless, the remedy was continued till April 26. The patient seemed to be cured, but on May 30 a slight relapse appeared which, however, disappeared quickly after renewing the *Thuja*.

We need not expect that we may cure all these cases with *Thuja* or with any one remedy. Only too often the ailment will resist every remedy, even the excision of the nerve. Still the example adduced is an encouragement and a proof that in treating this ailment we should never despair and not lightly pass on it the judgment of incurability.

Dr. Tessier, Sen. has cured several cases of tic douloureux with *Thuja* and *Coccus cacti* in alternation, and I myself can recount a number of such cure with the same remedies. Dr. Escalier has published in the *'L'Art Medical'* cases of tic douloureux which had resisted the excission of nerve, but were cured with *Thuja*.

The pains in *Thuja* are very lancinating, following the course of the nerve, and often accompanied with reflectory contractions of the muscular fibres. These phenomena appear especially in the face, cramp-like pains, violent contractions and sharp stitches in the upper jaw, in the cheek-bone, in the teeth, a sensation of interior cold, a sudden redness in the face, with attacks of pain and convulsive motions of the upper lip. The pains set up in the open air, from walking, and more rarely from touching.

Coccus cacti has less application in the treatment of tic douloureux than *Thuja*. It is indicated when the pain starts from the incisors or the eye-teeth. The pains are pressive with lancinations, are worse in the evening, in the warmth of the bed, and are accompanied with a rush of blood to the head and with salivation.

Thuja and *Coccus cacti* are not, however, the only remedies which have been successfully used in tic douloureux. *Mezereum* (3.—6.) has also done good services, when the pains appear with great severity in the cheek-bone on one side, and when they spread like lightning to the temples, the ear, the teeth and the gums and are aggravated by chewing, talking and by the slightest touch. The following case shows a brilliant result from *Mezereum* :

Mrs. X., fifty-six years of age, else in good health, has been suffering for several years from tic douloureux. The pains were situated in the right middle branch of the trigeminus, and radiated to the temple. The quick darting pain, which only appeared in attacks, was called forth by the motion of the jaw for eating and especially for speaking. On entering the hospital, the patient was seized with such an attack even without any motion of the jaw: she would alleviate the pains by constant pressure, which she exerted almost unconsciously with her hand on the part affected. She came to the hospital on November 5. She first received some doses of *Methylin*, after which the attacks appeared at somewhat longer intervals; but beginning with November 12 she received *Mezereum* 6 in the dilution every day ten drops. This remedy had been selected on account of aggravation from eating and was continued till November 23, and caused a noticeable improvement in the condition of the patient. On November 27th I prescribed ten drops a day of the 3 attenuation, this was given up to December 9, and caused a further improvement. From the 17th of December on, the patient received the 12 and the 30 attenuation of the remedy, and under the influence of these weak doses the condition of the patient improved so much that she could leave the hospital as cured on the 31st of December.

Phosphorus (6 and 12) influences chiefly those pains which are aggravated by eating and by speaking. I have had such patients, who would rather starve than eat and who were improved by taking *Phospshorus*. Also *Atropinum sulphuricum* in low triturations and *Strychninum Sulphuricum* which so frequently act favorably on the pain from atrophy of the spinal marrow, may also be used, as well as *Cuprum* and *Zincum*".

Cromwell Relics.

The *Lancet*, December, 14, writes the curious fact with regard to identification of the body of Cromwell thus :

"What became of Cromwell ? is the title of an article by Professor Churton Collins which appeared in 1881 in the *Gentleman's Magazine*. The question is a vexed one. According to an ancient tradition Cromwell's body was conveyed away immediately after his death in obedience to his last orders, and was buried on Naseby Field 'where he had obtained the greatest victory and glory.' According to another account, Mary, Lady Fauconberg, Cromwell's daughter was able to convey the body away from its grave in the Abbey and to have it buried in her husband's house of Newburgh in Yorkshire, where the tomb, an impenetrable marble one is still shown. Another corpse was substituted for Cromwell's in the Abbey and it was this nameless corpse which underwent the indignities put upon it in January, 1661, when the putative body was hanged on the gallows at Tyburn together with Ireton's and Bradshaw's, while the head was set on a pole above Westminster Hall. This head, still transfixed by a spike which was let through the cranium by means of a specially drilled hole, is now in the possession of Mr. Horace Wilkinson of Sevenoaks. It is the head, curiously enough, of some one whose body has probably been embalmed, for the top of the skull has been sawn off in order, presumably, to admit of the removal of the brains. The body to which this head belonged was buried under the gallows of Tyburn, unless, which is probable, the Fauconbergs obtained the body there and carried it off. Death-masks of Cromwell might throw some light on the question of the identity of the head. One of these was in the Museum of the Royal College of Surgeons of England a century ago. It is described by William Clift as 'an undoubted cast of the face of Oliver Cromwell.' It was presumably a death-mask. Another such is, according to Waylen, in the possession of the Rev. Thomas Cromwell, rector of Michel Dean, Gloucestershire. It may be mentioned that the measurements of the Sevenoaks head are said to correspond with those of extant likenesses and busts of the Protector."

CLINICAL RECORD.

Foreign.

A CASE OF DIARRHŒA TREATED BY VACCINIUM MYRTILLUS.

BY ALEX. H. CROUCHER, M.D. & C.M. ED., F.R.C.S. ED.

THE *Vacciniæ* form one of the Sub-Orders of the *Ericaceæ*, or Heath Order.

There are *Vaccinium myrtillus* (the bilberry), *V. vitis-idœa* (the red whortleberry), *V. uliginosum* (the black whortleberry). For a description of the characteristics and medical properties of *V. myrtillus* I cannot do better than to quote from Dr. Fernie's Book, "Herbal Simples."

He says: "This fruit, which belongs to the cranberry order of plants, grows abundantly throughout England in heathy and mountainous districts. The small branched shrub bears globular, wax-like flowers and black berries, which are covered, when quite fresh, with a grey bloom. In the West of England they are popularly called 'whorts.' and they ripen about the time of St. James's Feast, July 25th. Other names for the fruit are blueberry, bulberry, hurtleberry, and huckleberry. The little windberry has been acquired from its growing on whins or heaths; and bilberry signifies dark-coloured, whence, likewise, comes black-wort, as distinguished in its aspect from cowberry, or cranberry. By a corruption the original word myrtleberry has suffered change of its initial M into W (whortleberry). In the Middle Ages the myrtleberry was used in medicine and cookery, to which berry the whortleberry bears a strong resemblance. It is agreeable to the taste and may be made into tarts, but proves mawkish unless mixed with some more acid fruit.

"The bilberry (*V. myrtillus*) is an admirable astringent, and should be included as such among the domestic medicines of the housewife. If some good brandy be poured over two handfuls of the fruit in a bottle, this will make an extract which continually improves by being kept.

"Obstinate diarrhœa may be cured by giving doses of a tablespoonful of this extract taken with a wineglassful of warm water, and repeated at intervals of two hours whilst needed, even for the more severe cases of dysenteric diarrhœa. The berries contain chemically much tannin. . . . They are also called in some counties bleaberries, huckleberries, and blackhearts."

Some few years ago I read an article in the *Lancet* on the treatment of diarrhœa by *Myrtillus*, and at the time procured a liquid extract, but did not make use of it until on this occasion.

The *Medical Annual*, 1893, states that Dr. Winternitz used huckleberries (bilberries) in treating Leucopalkia buccalis and other diseases of the mouth, pharyngeal cavity, and tonsils. He treated cases successfully which had existed for weeks and months under other treatment; he used the berries as a gargle, and prefers a concentrated decoction.

The *Medical Annual*, 1904, mentions that Dr. Bernstein found that the bilberry fruit, in the form of an infusion, extract, syrup, or jam, is an astringent and anti-fermentative.

A decoction of the dried berries, the weight of the liquid being equal to the material employed, killed the *Bacillus typhosus* within twenty-four to forty-eight hours while the *B. coli communis* succumbed within twenty-four hours. The berries are non-poisonous, have a pleasant, fragrant taste, and can be readily mixed with mineral water, tea, milk, custard, or cream. Their action is not interfered with by the acid stomach or alkaline intestine. In typhoid fever, by preventing fermentation, they will reduce the risks of perforation. He finds the bilberry very useful in chronic dysentery. Corporal W. P., aged 22, 2nd Royal Sussex Regiment, was admitted into the Leaf Homœopathic Cottage Hospital on August 8, 1907, in a very grave condition, suffering from great pain and dyspnœa. Temperature 102·4F., pulse 120, respiration 39, intense anæmia, distension of the whole thorax and abdomen, especially the right side. The apex beat of the heart was in the fourth interspace anterior axillary line.

The patient went to Crete three years ago, and was there for one year; he was then in Malta for one and a half years; there he had fever; he came home in January, 1907, and was admitted into the Belfast Hospital for suspected duodenal ulcer. There was no history of dysentery. While in the hospital at Belfast hepatic abscess was later thought to be present, and exploratory punctures were made, with negative results. After being there some weeks he was sent home on furlough.

On the afternoon of the patient's admission I explored the right lobe of the liver with a long needle in the mid-axillary line and found pink pus.

The pus having been located, it was decided to open into the abscess cavity. On the same evening, therefore, at 9 p.m., I resected a portion of the ninth rib in the posterior axillary line, and then again finding pus to be present, by means of a hypodermic needle, I opened the abscess cavity and evacuated about four pints of the usual pink-coloured pus that occurs in a tropical abscess.

The patient's condition before the operation was decidedly bad, and we feared a fatal termination. After the operation, however, he improved greatly and the pain was much relieved.

After many ups and downs the patient got on splendidly and was discharged to the military authorities in an almost well condition on October 28.

However, I do not intend to dwell on the surgical aspect of the case, as it is to the remedial effects of the *V. myrtillus* in an obstinate diarrhœa that occurred during the course of his convalescence I wish to draw attention.

On August 27, diarrhœa set in and gradually became severe; the stools were of a liquid, pea-soupy character, sometimes blood-stained, slimy, the odour was offensive. The number of stools in each twenty-four hours varied from two to eight. Diet and medicines had no effect.

The medicines given were *china, arsen. alb., merc. cor., podophyllum, &c.*; the patient also had colonic irrigation of *argyrol* 1 per cent.

On October 10, liquid extract of *V. myrtillus* was given in 30 drop doses in half a wineglassful of water every four hours. From the commencement of taking this medicine the stools gradually improved, losing their liquid character and becoming formed and natural by October 15, and on October 28, patient was discharged. He has visited the matron of the hospital since his discharge and is doing quite well.

Patient's weight on October 14, was 8 st. 1 lb., and on October 28, 8 st. 8 lb. 15 oz. On November 16, the weight had increased to 9 st. 2½ lb.—The *British Homœopathic Review*, January, 1908.

A CASE OF COLD.

Reported by Dr. Newbery.

Colocynth Case.—H. S., aged 22, a fine looking young man, was first seen at his own house, when he gave the following history.

Some five or six years ago he was laid up with "pain in the stomach." After this he was well until about two years ago, when he was again laid up, the doctor whom he saw telling him he had "inflammation." Between this time and when he was first seen he had had several attacks of similar pain, necessitating his knocking off work.

On March 15th he was in bed, manifestly in great pain in the abdomen, from which he had been suffering without intermission for about three weeks. There was great tenderness but no particular distension, no tympanitis, and no rise in temperatures.

When first taken ill he went to see a doctor, and on leaving him, the pain was so intense that he had to be taken home in a cab. The bowels were moved freely but no diarrhoea. Tongue coated, whitish. Patient was taken in, put on milk diet, and given *colocynth* 3 m i j., 3h.

The pain left almost immediately, and in a few days he was able to take solid food and was discharged perfectly well in less than a fortnight.

NOTE.—*Griping* pain, so characteristic of the physiological action of *colocynth,* was the indication for the remedy.—The *British Homœopathic Review,* December, 1907.

HAHNEMANN HOSPITAL, BRISTOL.

MELANCHOLIA: RECOVERY UNDER PLUMBUM AND NUX.

Reported by Dr. J. Hervey Bodman.

J. W., aged 45, coal-miner, first seen May 17, 1907, at his home. About seven years ago he had been home for a week or two on account of rheumatism, and on going back to the pit was told that they could not take him on again, and this was a great shock to him. It caused a "shuddering, trembling feeling" which "went to the stomach" (epigastric region), and with it a feeling of "darkness and depression" came over him. This trembling and depression increased and persisted, and it seemed to him as though everyone was against him. If he went out of doors he thought everyone was looking at him, and this made him very averse to going out. After a time he got work again, but could not continue at it on account of the extreme restlessness and depression. For the last four or five years he has done no work. He stays at home and either paces restlessly about or lies huddled upon a couch; he gets very little sleep, and will not go out of doors. Refuses to believe that anything can do him any good. His face wears an expression of abject despair. As regards his physical condition nothing abnormal was noted. Prescribed *plumb. met.* 6, *t.d.*

June 21. Attended as out-patient. Much better the last week; has been able to rest and to sit down quietly. Has also been able to go out of doors without feeling that everyone was looking at him. Repeat.

July 5.—The improvement in his mental condition is maintained. Tongue flabby and furred. Bowels constipated. *Nux v.*6, *t.d.*

July 19.—Decidedly better. Repeat.

August 2.—Continues to improve. Sleeps fairly well. Bowels still rather constipated. *Plumb. met.* 6, *t.d.*

August 16.—Still constipated. Otherwise better. *Ac.phos.* 6, *t.d.*

August 30.—Started work in a quarry two days ago. The depression has quite passed away. *Strych. phos.* 3x, *t.d.*

September 13.—Is now doing harder work than ever before.

He has continued in full work ever since, and without any return of depression.

Remarks.—The change in this patient from abject misery and uselessness of several years' duration to cheerfulness and full wage-earning capacity was most striking, and he was only just over three months in passing from the one condition to the other. As he was not removed from his home and no change was made in his environment or manner of life, it seems reasonable to attribute the change to the remedies administered. The marked improvement during the first seven weeks, during which time he took nothing but *plumb. met.* 6, seems to indicate that most of the benefit should be attributed to this remedy.—The *British Homœopathic Review,* January 1908.

A CHARACTERISTIC SYMPTOM OF ASARUM EUROPEUM.

BY E. M. HALE, M.D.

(142) *Scanty, yellow mucus stool in one string* (*Materia Medica, Pura,* vol. i., p. 173).

A woman, two months after confinement, from which she made a slow recovery, having had profuse and prolonged lochia, followed by tenacious leucorrhœa, applied for a prescription for "dysentery," saying that she had stool of mucus with pains in the belly. She took *mercurius* and *pulsatilla,* each a few days, but without benefit. I now insisted upon a more definite description of the stool, and was shown one of three or four which had occurred that day. It was a *long, yellow, twisted string of inodorous mucus.* Three doses of *asarum* 2d cured the cases. She had but three or four such stools after the first dose.

A woman, four months after confinement, complained of pain in the region of the descending colon, with fæcal discharges coated with mucus. *Podophyllum* 2d was given. In three days no fæcal discharges occurred, nothing but *long, yellow tenacious strings of mucus* (inodorous). Six pellets of *asarum* 3d, after each stool, arrested them in two days.

A second attack occurring in the same lady after a cold, three months after, was cured promptly with *asarum* in the same doses.

These three cases are quite sufficient to establish the reliability of this symptom as a "characteristic" of *asarum*. Was it only a coincidence that they occurred after a severe confinement? or does the intimate relation which *asarum* holds to the generative organs have anything to do with the condition cured? It is notable that the *tenacious yellow leucorrhœa* in Case I disappeared with the intesinal blenorrhœa.

It may be well here to compare this symptom of *asarum* with similar ones belonging to other remedies.

Ammonium muriaticum has "discharge of glairy, tough, mucus with stool" (the peculiar *shape* of the *asarum* stool is wanting).

Dulcamara.—"White mucous diarrhœa" (not sufficiently definite to be a good indication).

Graphites.—(1) "Knotty stool," the lumps being united by mucus threads; even after the stool is expelled there is yet some mucus about the rectum. (2) Stool of the size of lumbricus. (3) A quantity of white mucus is expelled with stool. (4) Reddish mucus is expelled with stool. Each of the four symptoms differ from the *asarum* symptom. Did the stool in No. 2 consist of a string of mucus, or was it fæcal matter?

Hamamelis.—"Natural stools covered with mucus."

Podophyllum.—(1) Muco-gelatinous stools, preceded by severe griping and nausea. (2) Dark yellow mucus, which smells like carrion. (3) Stools coated with shreds of yellow mucus. (Although having a close similarity there is sufficient difference observable between these and the *asarum* symptom; the mucus stool caused by *asarum* is *inodorous*, that of *podophyllum* nearly always fœtid. Symptom (1) has a gelatinous appearance, and (2) is mixed with fæces.)

Colchicum.—"Frequent evacuations of *transparent,* jelly-like mucus, relieving the colic." (This resembles the gelatinous mucus of *podophyllum.*)

Copaiva.—"White diarrhœic stools in the morning." (I have cured several cases of intestinal catarrh, in which the *white* mucus stools occurred in the morning; the mucus is not in "one string," as in *asarum,* but comes away in larger masses, and is not as tenacious.)

Other remedies might be mentioned, but enough have been cited to illustrate the importance of individualising each case and selecting the medicine, not from a vague pathological indication, but from its peculiar or characteristic symptom, resembling most closely the characteristic symptom of the disease. It matters not whether that symptom be objective or subjective, if the drug-symptom and the disease-symptom correspond we shall have a rapid and briliant cure. —The *British Homœopathic Review,* January, 1908.

Gleanings from Contemporary Literature.

SOME OF THE NEWER METHODS OF URINALYSIS AND THEIR CLINICAL IMPORTANCE.

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In my talk this evening, I do not wish to magnify the importance of the laboratory in medicine. The laboratory cannot of itself make diagnoses, nor directly indicate treatment, but is only one of the several links. It is, however, an indispensable link, if we regard diagnosis in its true meaning of "knowing all the way through," and not merely of giving a name to a disease. For this laboratory and clinical methods cannot be separated.

Although my subject is "Some of the Newer Methods of Urinalysis," I have been governed, in selecting the methods of which I shall speak, less by their novelty than by other considerations. I have tried to keep in view the object of these talks as it is stated in your printed announcement: ". . . a series of demonstrations and talks upon methods of examination which have proved their practical importance. . . . and which should be more widely applied to the study of cases by all members of the medical profession." What I shall say is, therefore, for the practitioner, rather than for the laboratory man.

At the start it is probably worth while to say a word about

PRESERVATION OF THE URINE.

This subject has not received the attention which it deserves. Every physician has frequent occasion to keep urine several days before examination ; and, as is well known, a satisfactory examination is impossible after decomposition has begun.

Undoubtedly the best preservative is boracic acid, about five grains to four ounces of urine. This raises the specific gravity one or two points, but does not interfere with the chemical tests nor the microscopical examination. Boracic acid is most conveniently used in the form of five grain tablets; but tablets containing sugar milk should of course be avoided. Ogden not long ago made a series of experiments with all the ordinary preservatives, including boracic acid, formalin, salicylic acid, benzoic acid, mercuric chloride, chloroform, chloral, camphor and thymol. He found formalin—one drop to four ounces—to be quite as efficient a preservative as boracic acid, preserving urine unchanged from three days to three weeks, according to the character of the urine. There is, however, danger of using too much formalin. When added in proportion of one drop to one ounce, it will reduce Fehling's solution and give Heller's test for albumin ; and is likely to cause a precipitate which greatly interferes with the microscopical examination. None of the other preservatives which Ogden tried, delayed decomposition so long as boracic acid and formalin, and most of them interfered with the subsequent examination.

THE "PANCREATIC REACTION."

One of the most interesting of the newer methods is that devised by Cammidge in conjunction with Mayo Robson for the diognosis of acute pancreatitis—the so-called "pancreatic reaction."

The original method was described in 1904. There were certain disturbing factors which, in many cases, rendered the results confusing and untrustworthy. Cammidge has therefore improved and simplified the method; and has recently published details of the improved technique, together with the results of 100 consecutive urinary examinations.

The method is tedious, but no one of its steps is difficult. It consists essentially in boiling the urine with hydrochloric acid treating with tri-basic lead acetate, and applying the phenylhydrazin test. In well-marked cases of pancreatic inflammation, a precipitate of yellow, flexible, hair-like crystals occurs within a few hours. These crystals are evidently a compound of phenylhydrazin with some unfermentable carbohydrate, derived by the boiling with hydrochloric acid from some antecedent substance, which, as a result of metabolic disturbances, is excreted in pancreatitis. Cammidge is uncertain as to its exact nature.

His results with the improved method are very encouraging. In the vast majority of cases, operation and the later history have confirmed his conclusions based upon the urine examinations. Very little has been done by other workers. Should further clinical observation confirm the claims which have been made for it, this is certain to be a very important addition to our methods of diagnosis.

In connection with the pancreatic reaction, I should like to demonstrate the

PHENYLHYDRAZIN TEST FOR SUGAR.

It has long been known that phenylhydrazin in combination with certain carbohydrates, forms characteristic crystalline compounds. Von Jacksch first applied this fact to clinical work.

The phenylhydrazin test is the court of last appeal in the recognition of sugar in the urine. It is at once the most sensitive and the most reliable of our clinical tests, excepting, perhaps, polarization with the best instruments. Stern gives its limit of reliability as 0·05 per cent. of glucose, while the copper and bismuth tests are reliable only to 0·3 per cent. It is capable of detecting the traces of sugar in normal urine (McEwen). It does not distinguish between the different sugars which may be found in the urine, but they can be distinguished by determining the melting points of the crystals.

As ordinarily applied, the test is rather too cumbersome for routine clinical work; hence it has not found favor with physicians generally. When applied, however, by the method suggested by Kowarsky in 1899, it is very simple and requires little more time than Haines' or Fehling's tests.

Kowarsky's method is as follows: In a test tube he takes 5 drops pure phenylhydrazin, 10 drops glacial acetic acid, and 1. c. c. saturated solution table salt. This forms a crudy mass. Two or three cubic centimeters of the urine are added, and the mixture boiled for at least two minutes. It is then set aside to cool slowly. In the presence of any considerable amount of sugar, a yellow precipitate appears within a few minutes; when traces only are present, it may not appear for a few hours. Under a low power of the microscope the sediment is seen to consist of yellow, needle-like crystals, arranged in sheaves and rosettes. Unless these characteristic crystals are found, the test is negative.

Kowarsky's modification is not so sensitive as the original method and will not detect sugar in normal urine. Although many sugars are capable of forming similar crystals, yet, in practice, the test reacts only to glucose and levulose. Levulose is an unimportant fallacy.

ACETONE BODIES.

The occurrence of acetone in the urine in many gastro-intestinal disturbances, in fever, and especially, in diabetes has long been recognized. Within the past few years acetonuria has assumed renewed importance, particularly to the surgical portion of the profession, because of the recognition of its frequent association with a serious, and often fatal toxemia following anesthesia.

Under the name of acetone bodies are included three closely related substances: Acetone, diacetic acid and beta-oxybutyric acid. Acetone results from decomposition of diacetic acid and diacetic acid in turn from oxybutyric acid by a process of oxidation. The origin of oxybutyric acid is not definitely known, although it is generally believed that its principal, if not its only source within the body, is in some complex metabolic disturbance with abnormal destruction of fats. When the derangement is mild, acetone only appears in the urine; as it becomes more marked, diacetic acid also appears; and when severe, beta-oxybutyric acid is added. The three substances appearing in the urine in this order thus indicate an increasing disability of the body to carry on its metabolic processes.

Whenever acids are produced in the body—or are introduced from without—in sufficient quantity to lower the alkalinity of the blood, the symptoms of acid intoxication appear. The condition is probably due chiefly to acidosis in general, not to the specific action of any one acid, since the symptoms have been produced in animals by introduction of various acids, both organic and mineral. Diacetic and beta-oxybutyric acids, are, however, the most common and important of the acids producing acid intoxication as a clinical condition; and the experiments of Wilbur tend to show that beta-oxybutyric acid has a similar, though less toxic effect even when neutralized.

The most significant clinical sign of acid intoxication is the presence of acetone in the urine. Acetone is harmless in itself, and often occurs in the urine unassociated with any symptoms; but its presence is evidence of some metabolic derangement with production of acetone bodies, which, if the oxidative and excretory functions of the body cannot meet the demand, will have serious consequences.

The frequency and importance of acetonuria in diabetes is so well known that I shall not speak of it, except to say that frequent examinations of the urine for acetone yield a better idea of the progress of the disease than do examinations for sugar. Nor shall I more than mention the occasional occurrence of acid intoxication as an apparently independent condition. Here intestinal poisons probably cause the metabolic disturbance which results in over production of acids. Such cases offer decided difficulties in diagnosis, which would probably be impossible without detection of acetone or diacetic acid in the urine.

The recent widespread revival of interest in acetonuria is due to a constantly increasing number of reports of delayed poisoning from anesthetics always accompanied by acetone in the urine. The idea that the poisonous effect of an anesthetic is over as soon as the patient has regained consciousness is being discarded.

Since 1890, occasional deaths ascribed to the late effect of anesthetics have been reported. In general, the autopsies revealed only extensive fatty degeneration, particularly marked in the liver. Some of these cases, even as late as 1903, were reported as acute yellow atrophy of the liver occurring as a sequel to operation or anesthenia. It is only within the past three years that a relationship between such cases and acetonuria has become well recognized. The comparative frequency of an exactly similar toxic condition occurring independently of anesthenia, especially in children, is also attracting attention. In 1904, Brackett, Stone and Low reported in detail a remarkable series of cases observed within a period of five months in the Boston Children's Hospital. These cases more than any others, have stimulated observation along this line. Seven of the patients in their series developed alarming symptoms 12 to 48 hours after operation, and three died. The similarity of the symptoms was suggestive: "Vomiting associated with collapse; weak, rapid pulse; absence of fever until just before death; cyanosis causing extreme dyspnea in the fatal cases; apathy and stupor, alternating with restlessness at first, but in fatal cases deepening into coma and death; and the presence of acetone on the breath and in the urine." Diacetic acid was also present in the urine. The anesthetic was ether in every case; and the operations were nearly all trivial, most of them being tenotomies. In six cases of Brackett, Stone and Low's series, exactly similar symptoms came on without operation, generally within two days after admission to the hospital; but these cases were milder, and only one death occurred. Autopsies in all the fatal cases showed extensive fatty changes, especially in the liver. All of these patients were children; most of them were nervous, frighten-ed, or homesick; and all of the fatal cases had extensive muscular atrophy. The amount of acetone and diacetic acid in the urine bore no relation to the severity of the symptoms.

Similar cases have been described in this country by Brewer, Kelly, Hubbard, Bevan and Favill, and others.

Lewis Beesly has studied a considerable number of cases in the Royal Hospital for Sick Children, Edinburgh, and concludes that, while symptoms may develop after operation without pre-existing acetonuria, yet they are much more apt to appear and are more severe, if the urine contains acetone before operation. He does not, however, regard long continued acetonuria, such as occurs in diabetes, as so ominous as acute acetonuria, such as often occurs in gastro-intestinal disturbances, notably appendicitis, and in uterine fibromatosis. He finds chloroform much more dangerous than ether. Of 19 cases of acute perforating appendicitis with acute acetonuria operated upon under chloroform, 14 died with symptoms of acid intoxication. Of 24 exactly similar cases operated upon under ether, five developed symptoms but none of them died. To all cases in which trouble from this source is anticipated, he now gives 15 grains of sodium bicarbonate t.i.d. for eight days previous to operation, with very satisfactory results.

I think we can sum up the practical importance of acetonuria as shown by these and other recent clinical observations as follows :

(1) The clinical similarity of diabetic coma, delayed poisoning from anesthetics, and the so-called cryptogenic acid intoxication seems to indicate their origin in a similar metabolic disturbance. Mild grades give no toxic symptoms; severe grades are accompanied by very grave symptoms and generally terminate fatally.

(2) Whether the condition is due to the presence of diacetic and beta-oxybutyric acids in the blood, as is probable or to other toxic products, its most trustworthy clinical sign is the presence of acetone or diacetic or both in the urine.

(3) This obscure metabolic disturbance can be induced by anesthetics, particularly chloroform, and also, but to a less degree, by fright and other mental disturbances, gastro-intestinal toxemia, and other causes not understood.

(4) Persons with acetonuria but no toxic symptoms are already suffering from it in mild degree, and are much more likely than others to be precipitated into a dangerous state of acid intoxication. They are therefore unfavorable subjects for anesthesia; particularly so when the acetonuria is not of long standing. Acute gastro-intestinal disturbances are often accompanied by acute acetonuria, hence the relative frequency of acid intoxication following operations for appendicitis.

(5) The ocurrence of this condition is much more common than the paucity of reported cases would indicate. The symptoms have been variously attributed to delayed shock, sepsis, etc. This was well illustrated

in the discussion of Bevan and Favill's paper at the Portland meeting of the American Medical Association. Each one who entered into the discussion recalled similar cases in his own experience.

Tests for acetone and diacetic acid should be made a matter of routine in urinary examinations, particularly in cases of diabetes and in surgical cases. There is no good clinical test for beta-oxybutyric acid; but since acetone and diacetic acid always precede and accompany it in the urine, a test for it is unnecessary in practice. It is essential that urine to be tested for these substances be fresh.

Probably the simplest and best clinical test for diacetic acid is the well-known Gerhardt test. This was used by most of those who have observed diaceturia after anesthesia. A new test—really an improvement upon an old one—has lately been published by Lindemann. He acidifies about 10 c. c. of the urine with five drops 30 per cent. acetic acid, and adds five drops Lugol's solution, and about two c. c. of chloroform. The chloroform does not change color if diacetic be present, but turns red in its absence. He claims this test to be more reliable than Gerhardt's, in that drugs will not give it; and in a series of comparative tests he has found it much more sensitive.

The tests for acetone in general use are Legal's and Lieben's, and with these you are probably familiar. Neither is entirely satisfactory. The physician wants a test which is reliable and reasonably sensitive without distillation of the urine, which is easy to apply, and which gives an easily recognized end reaction. The tests recently proposed by Frommer and by Lange seem to meet these requirements.

Frommer alkalinizes about 10 c. c. of the urine with two or three c. c. of 40 per cent. caustic solution, adds 10 or 12 drops or 10 per cent. alcoholic solution of salicylous acid, and heats the upper portion nearly to the boiling point. In the presence of acetone a purplish-red color appears in the heated portion. This test is very satisfactory in practice.

Lange's test is a modification of Legal's, but is more sensitive and gives a sharper end reaction. To a small quantity of urine is added about one-twentieth its volume (one drop for each one c. c.) of glacial acetic acid, and a few drops of fresh concentrated aqueous solution of sodium nitro-prussid. A little strong ammonia is then run gently upon its surface. If acetone be present, a purple ring will form within a few minutes at the junction of the two fluids.

I mention Lange's method for the benefit of those who prefer the "ring" tests. The ring method of applying tests has deservedly become very popular. Probably the best device for this purpose is the "horismoscope," which has been widely advertised, and with which you are no doubt familiar. Personally, I consider a conical glass, one side of which is painted black, part white, to be every whit as satisfactory, besides being less expensive and much less easily broken. By inclining the glass, the second fluid can easily be run in upon the surface of the first by means of a medicine dropper so as to form a sharp line of contact. Boston's pipette method, which seems to be widely used, is open to serious objections. Pedersen has recently suggested the use of a long medicine dropper in place of Boston's open pipette, and this is a distinct advantage. The fluid which is to form the upper layer is drawn into the dropper to its full capacity. Half of this is then forced out and the other fluid drawn in. The bubble between the two fluids will rise to the top, leaving a sharp line of contact. The insurmountable objection to this method is the small diameter of the column of fluid, the ring being less distinct than with a greater thickness. When the ring is white, as in the case of albumin, it should be viewed against a black background. For colored rings, I find that nothing brings them out so clearly as to view them against a sheet of thin white paper held toward the light.

EHRLICH'S DIAZO REACTION..

While this test is by no means new, having been published twenty-five years ago, yet more has been written upon it within the past few years than upon any other urinary test. That is my reason for discussing it here. Considering its simplicity and the vast amount of evidence as to its value which has accumulated, it is remarkable that the average well-informed practitioner knows very little of it, and rarely or never uses it in his practice.

The reaction depends upon the presence in the urine of a substance—the so-called "diazo substance"—which, when treated with diazo-benzol-sulphonic acid and ammonia, produces a characteristic red color. After twenty-five years of study, the exact nature of the substance is still unknown. It is certainly not the result of intestinal putrefaction, and bears no relation to indican; nor does it depend upon fever, as its presence in many a febrile cases shows. It is not driven off boiling; in fact the reaction becomes more marked as the urine is concentrated.

To use it intelligently, the physician should realize that it is an empirical test. It has been met with in a considerable number of diseases, and therefore cannot be claimed to be pathognomonic of anything. It is only an important symptom. Its clinical usefulness is practically limited to the diagnosis of typhoid fever, the prognosis of pulmonary tuberculosis, and the differential diagnosis of measles. Among several hundred diazo tests this winter, I have found a distinct reaction only in these three diseases. In one case of suspected typhoid a doubtfully positive reaction was obtained, and the case afterward proved to be one of pancreatic abscess. It is a safe rule to regard all doubtful reactions as negative.

Typhoid fever. While the diazo reaction is not so closely indentified with the disease as is the Widal reaction, yet the simplicity of the test makes it even more widely useful. It can easily be made a matter of routine by every physician. Hastings states that "the reaction is held to-day of equal importance with the Widal test and urine cultures in Ehrlich's laboratory at Frankfort."

A positive reaction can be obtained in nearly every case of typhoid fever during the second week at least. Combining the statistics of seventeen observers, I find 2,621 cases of typhoid, of which 2,266 or over 86 per cent. gave a positive reaction. The lowest percentage was 52 per cent.; the highest a little over 97 per cent. These percentages, however, do not at all accurately represent the real number of cases showing the reaction. They are much too low because a very large number of the examinations were made late in the disease, and even during convalescence. Billings, in a report of the work done with the diazo in conjunction with the widal reaction by the New York Department of Health, concludes that the diazo is even more constantly present than the Widal, and that in the majority of cases it appears 48 hours earlier. A negative reaction, therefore, is almost positive proof that the disease in question is not typhoid, provided, of course, that the test is not made too late in its course.

The reaction is generally stronger in typhoid than in any other disease; hence as Cummins has shown, if the urine be highly diluted the reaction of other diseases is prevented, and a positive reaction becomes much more strongly suggestive of typhoid. He finds that with a dilution of 1 :150 the reaction is practically pathognomonic of typhoid. This, however, is of less value than would appear, because many cases of typhoid will not respond at anything like that dilution. Personally, I have tried the dilutions in only a few cases of undoubted typhoid, but have not been able to obtain a positive reaction in greater dilution than 1 : 30. The discrepancy is probably to be explained by the fact that typhoid in this region does not compare in severity with that in Philadelphia where Cummins did his work.

Ordinarily, the reaction appears about the fourth or fifth day of the disease, although it is sometimes delayed. In contrast to the Widal reaction, it begins to fade about the end of the second week, and soon after entirely disappears. An early disappearance is generally a favorable sign. It reappears during a relapse, and thus aids in distinguishing a relapse from a complication, in which it does not reappear.

Tuberculosis. Recent work upon the diazo has been directed chiefly to a study of its significance in pulmonary tuberculosis. It is rarely found in mild cases, except during some acute complication. This is a suggestive point. In all of Budden's six cases of pneumonia and bronchitis with a positive diazo, an underlying tuberculosis was afterward discovered. It is probable that in many cases in which the reaction is unexpectedly positive, an unrecognized tuberculosis also exists.

After it once appears, it persists more or less intermittently until death. While an occasional patient showing the reaction may recover, Michaelis has put the average length of life as six months after its appearance. Most observers agree with him. Widstrand, who examined 2,000 urines from 204 consumptives, found a constant reaction in 37 of the 40 cases which died in the hospital. In his mild cases it was absent. Holmgren, from a study of the records of 158 cases, concludes that, following a strong reaction the average length of life is about six to eight weeks; while with distinct but not strong reaction the maximum is 18 months.

Apparently about 10 per cent. of grave cases do not show the reaction (Wood), but it is possible that some at least of such cases have been tested during intermissions. The reaction is often intermittent, and is known to fade before death, generally the day before. Urine obtianed from the bladder after death does not give it (Budden).

The conclusion is apparently inevitable that the diazo reaction is an extremely important sign in the prognosis of pulmonary tuberculosis. The only view to the contrary seems to be that which Budden and some others express. Budden agrees that practically all the cases which give the reaction die, but holds that "these are precisely the cases in which the grave prognosis would be evident from the history and the clinical signs. Even if this were invariably true, it is certain that the reaction would furnish the clinician a simple means of confirming his opinion. We must recognize, however, that a large proportion of physicians are not well versed in chest examinations; and also that, in addition to those cases the prognosis of which is evident from the physical signs, there are undoubtedly other cases in which the presence of a marked diazo reaction indicates the gravity of the situation at a time when the physical signs are apparently insignificant. Simon in his "Clinical Diagnosis" says that, personally he regards "the outlook as very bad in those cases in which the reaction is almost constantly present, even if the physical signs are but little pronounced." In his excellent article in the American Journal of the Medical Sciences, Arneill corroborates this from his own cases, and gives a striking illustration in the case of a man who came to the hospital with a diagnosis of dyspepsia. The diazo reaction was marked. There were very slight signs of infiltration at the right apex, but eleven days afterward tubercle bacilli were found in the sputum, and later in the feces. The patient died six weeks after admission, the diazo being almost constantly present during the time.

Wood suggests that the reaction be used in deciding whether consumptives can be benefited by a change of climate. While of course it would often be misleading if considered apart from the physical signs—as no laboratory examination ever should be considered—yet we cannot doubt that if it alone were relied upon, fewer hopeless cases would be sent West with the certainty of dying away from home and friends.

Measles. From the records of a number of observers, only about 20 per cent. of cases fail to show the reaction. It generally appears before the eruption and remains about five days. In the cases I have examined, it was never absent when the test was made before the fourth day of the eruption, and was never present after the fifth day. It does not appear in German measles, and is therefore useful in differential diagnosis.

I think we are warranted in summing up the aid which the diazo reaction offers to the practitioner as follows:

(1) It is of great value in differential diagnosis of typhoid fever, generally appearing earlier than the Widal reaction and being nearly as constantly present. It can therefore be said to be "negatively pathognomonic." When obtained in high dilution, it has great positive diagnostic value. Its disappearance at the beginning of the third week indicates a mild case. Its reappearance points to a relapse rather than to a complication.

(2) It is a valuable and practicable aid in the prognosis of phthisis, particularly to those who are not skilled in examinations of the chest; and it may be the first indication of a fatal prognosis in an occasional case with very meagre physical signs.

(3) The reaction is useful in distinguishing between measles and German measles.

(4) Its presence in any disease not in the list of those generally producing it, particularly pneumonia, bronchitis and tonsilitis, should lead to suspicion of an underlying tuberculosis.

Certain drugs are said to interfere with or prevent the reaction. Among these are creosote, tannic acid and its compounds, opium and its alkaloids, salol, carbolic acid, and the iodides, some of which are frequently administered in typhoid and tuberculosis. They probably act upon the reagents used in the tests, rather than upon the diazo substance itself.

Technique. While the test is really very simple, it is not possible to emphasize too strongly the importance of careful attention to technique. The early investigators were very lax in this regard. Many of them found the reaction in normal urine, and in all sorts of diseases. Undoubtedly, faulty technique and failure to record the stage of the disease in which the tests were made have been responsible for the bulk of the conflicting results reported.

The reagents required are:

(a) Staturated solution sulphanilic acid in five per cent. hydrochloric acid.
(b) 0·5 per cent. aqueous solution sodium nitrite.
(c) Stronger ammonia.

One part of the sodium nitrite solution is added to 40 parts of the sulphanilic acid solution. Equal parts of the test solution thus prepared and of the urine are mixed in a test tube, and a small amount of ammonia is poured upon the surface. If the reaction be positive a bright red ring will appear at the junction of the mixture and the ammonia; and upon shaking a distinct pink or red color will be imparted to the foam.

If the test is to have any value, the following precautions must be observed:

(1) The reagents must be accurately made.

(2) They must be fresh. It is a good plan to make the sulphanilic acid solution once a month, and the sodium nitrite solution once a week. Older solutions will often give good results but it is not safe to depend upon them.

(3) The solutions must be mixed in the proportion of one part of (a) to not less than forty of (b). Greene mixed them in proportion of one to 100, and claims that thereby some of the other diseases are excluded, and the reaction has more value as a sign of typhoid. Personally, I prefer the proportions generally adopted, one to forty, because Greene's method might exclude also some cases of typhoid which give a weak reaction. Much the better way to exclude other conditions is to make the test with diluted urine.

(4) The urine must be fresh, not more than 24 hours old. Urines several weeks old sometimes give the reaction; but others lose it within a short time.

(5) Due account must be taken of the concentration of the urine. A positive reaction can sometimes be brought out in a dilute urine by boiling until concentrated.

(6) Probably the most important source of error is in wrongly interpreting the color. The test must be performed by daylight. Many workers have considered only the color of the ring at the junction of the ammonia and the urine. A positive reaction gives a pure red ring without a trace of yellow, but rings of various shades sometimes closely approaching the red are frequently encountered and easily cause confusion. The essential feature is the color of the foam. This varies with the intensity of the reaction from an eosin pink to a deep crimson ; but it is imperative that it be pink or red, not orange. I am in the habit of thoroughly shaking before the ammonia is added, and of pouring the ammonia upon the foam. The pink color instantly appears in the portion of the foam which the ammonia has reached, and is readily seen by contrast. This does not interfere with production of the red ring at the under surface of the ammonia.

RUSSO'S REACTION.

In 1905 Russo published a test which he claims gives parallel results with Ehrlich's diazo reaction, and has certain distinct advantages, particularly in simplicity of technique and stability of the solution employed. His tests in a large number of diseases show an almost invariable parallelism between the two reactions. The test consists merely in the addition of four or five drops of a one to 1,000 aqueous solution of methylene blue to four or five c. c. of the urine. If it be positive, the urine turns emerald or mint green upon shaking; if negative, blue or greenish-blue.

The new test has attracted very little attention in this country. I can find only a few short notes and abstracts in our journals. A number of articles have however, appeared in English, German and French journals.

Rolleston has compared the methylene blue reaction with the diazo in 54 cases of typhoid, and finds that the former is more constantly present, appears earlier, persists longer, and more frequently reappears during a relapse. He has also obtained positive reactions in 18 out of 20 cases of measles, and in several cases of scarlet fever, pneumonia, diphtheria and some other conditions. He believes that the diagnostic value of the reaction is similar, but not superior to that of the diazo.

R. Dunger reports examinations of 1,100 urines by both these methods. He did not find any marked parallelism, but rather the opposite in a fairly large percentage of the cases. He concludes that Russo's reaction has no diagnostic value; but that, as had already been claimed by Cousin and Costa, and Gandy in France, it is simply a physical phenomenon due to admixture of a blue fluid with a yellow urine.

Within the past few months, I have applied the two tests to urines from more than 200 patients, representing over thirty pathological conditions. While a certain parallelism was evident, in that Russo's reaction was never negative when the diazo was positive, yet it was positive twice as frequently and in a much greater variety of conditions than the diazo. I am convinced that the test has no value, and that mixture of colors explains the whole phenomenon. I never obtained a reaction in a pale urine. When urines which gave both it and the diazo reaction were diluted to a light amber color they lost the methylene blue reaction but gave the diazo with only slightly diminished intensity. A deep amber urine which gave both reactions, was compared with a pale amber normal urine. When the darker was diluted to the same shade as the other, both gave a negative methylene blue reaction with the same shade of blue. When, upon the other hand, the lighter urine was brought to the color of the darker by addition of a little urine heavily charged with bile pigment, then the two urines gave a strongly positive reaction with the same shade of green. That the small amount of jaundiced urine did not in itself produce the reaction was demonstrated by mixing it with water in the same or greater proportion, and obtaining a negative reaction.

I have mentioned Russo's reaction chiefly to show how easy it is to be led astray by new and, especially, empirical methods.—*Medical Times*, October, 1907.

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EPIDEMIC ANÆMIA.

Serious doubt has been entertained by medical practitioners whether the form of epidemic dropsy which is recently occurring in Calcutta and its vicinity can be called beri-beri. Indeed, some of them are so much disposed to call it by that name that they seem to have settled the question. One glaring fact is that records show that beri-beri has occurred in India for a long time though not particularly observed in or near Calcutta. They assume, as the disease was known to have occurred in the southern presidencies, it is no wonder, that it has travelled up and spread to the uninfected parts of India by railway communication to Bengal. They apprehend that the disease came into this province after the Madras famine of 1877. The wonder is that no cases of like nature have been observed before that time, though famine occurred several times and in several places. Further, Madras was under the chronic pressure of famine in 1729, 1781, 1790, 1799, 1805, 1823, 1833, 1854, 1865, and 1877. Since that time famine has become endemic in India. Entertaining a hopeful view of their assertion, the utmost that can be said is that beri-beri has changed its appearance on account of the local influence and assumed the new appearance.

A parallel instance may be cited, that is with regard to *Bishuchika*. One party entertain the idea that Bishuchika of ancient India having assumed a changed appearance has manifested itself as cholera. Another are firm in their belief that cholera has travelled from China by the way of commercial transport, where it was called by the French Mordoxienne de Chine, and has been referred to by the late Dr. Hunter in his History of India. However, it is not easy to settle the question. The probability lies on the latter assertion.

In the case of epidemic dropsy, the difficulty is to suppose the creation of a new disease, when it does not appear to have existed anywhere else and no records are known to support the view. The alternative would be to assert the metamorphosis of the disease in its new habitat under the pressure of surrounding influence.

Leaving the discussion undecided, we would call it Epidemic Anæmia instead of epidemic dropsy. The reason for this change is that anæmia is the chief character in all cases of the new disease and not dropsy. There may be slight anæmia with loose stools and œdema of the legs so as to avoid detection; but close observation will manifest the appearance of anæmia. In cases with organic heart diseases, dropsy may not be present but anæmia is a marked character. In functional derangements of the heart, dropsy may supervene after a short period. But in organic failures of the heart, death soon follows without the evidence of œdema of the legs. It may be said that œdema would have appeared had the sufferers been spared a short time more. Even taking that view of the fact, the principal character observable from the very first is anæmia and not dropsy. A case of organic heart disease without dropsy occurred in our family. For this reason, it would be proper to call the disease Epidemic Anæmia, until a suitable term is found deciding the question of so many contending views. In fact, more observation is necessary to have a precise name, as epidemic dropsy is a disease of recent occurrence.

The disease was first observed in Calcutta in 1878. In that year, it attacked a few families. The present writer with many others of the same house suffered from the disease. The mortality was also high. Among our family of twenty-one persons, eighteen suffered from the disease of whom eight died, within three months. The disease was observed to appear in the month of November and we had to go away from Calcutta for a change in the beginning of February. It so happened that the change averted the death of others. The principal symptoms with us were anæmia, with œdema of the legs in most cases. In three cases there was slight peritoneal dropsy. The fever was a persisting symptom. One died of mitral regurgitation and from extreme anæmia without dropsical swelling. Another from sudden high fever and coma. The third had persistent bloody stools for nearly three weeks with six or seven evacuations in a day without dropsical swelling, but he was cured. A few paid the last debt of existence by fever, dropsy and sudden failure of the heart's action. Fever was a persisting symptom in all cases. This was the miserable, gruesome tale in our family in 1878. The fear of the neighbours was so much that they avoided to pass by the house. Friends could not hazard to peep in the house out of consternation of the disease and many deaths. We were as if paralysed by the havoc of the distressing malady. At last with great recuperation of energy, we broke away from the fetters of the disease and the house to fly to Bankipore and thought ourselves safe.

Since then a few cases have come under our observation in which fever was more or less absent. Reports reached of other severe attacks, now and then, from some part or other of Calcutta. Dr. McLeod's cases reported in the Indian Medical Gazette were mild attacks in comparison to those which have been observed by us. A description of the symptoms of the disease has been given by Dr. Satya Charan Mittra, which he observed in Howrah in 1907, in the Calcutta Medical Journal, January, 1908. Our observation and the record of cases force us to conclude that Epidemic Anæmia leading to dropsy is not beri-beri, as has been supposed by some. It is essentially a tropical disease, and having some symptoms allied to several other diseases of which malaria is a leading type. Perhaps, the day is not distant when a microbe of the class of trypanosomata will be discovered, to give it a definite character. It is a curious fact that almost all trypanosomata have anæmia as the leading feature. Malarious trypanosoma comes within that range, as also the sleeping sickness of Africa. Beri-beri has not fully come within the survey of the modern microscope. Unless bacteriological difference is observed between them, no definite settlement can be made and a nebulous idea will remain.

Symptoms.

Head. Including the cases of fever, vertigo is generally present, attended with general debility. The intellect does not undergo any change. Memory remains as good as it was before. Headache is present, but it is not a constant symptom. In some cases occipital headache is more marked than the frontal. In fever, headache may or may not appear.

Eyes. The eyes look dull on account of the increasing anæmia. This is at the commencement of the disease. The progress is generally slow, but sometime rapid attacks are observed, without any other premonitory symptom. Sunken eyes are marked when the disease has made some progress. Puffiness of the eye-lids is a rare occurrence.

Face. The sallow appearance of the face may be the begining but remains undetected at first. As the disease slowly advances, the bad appearance becomes mostly manifest. The sunken eyes and the haggard face are in proportion to the early manifestation of diarrhœa which is a peculiar characteristic of the disease. Heaviness of the face sometimes occur. Bleeding from the gums and nose is a preliminary in few cases.

Stomach. Digestion is generally slow. During fever there is little thirst. The appetite is dull. A cup of barley or arrowroot water generally satisfies the patient. Vomiting of bile with frothy watery substance is sometimes observed. Milk generally disagrees. In cases without fever and with diarrhœa, rice increases the dropsical swelling, as it generally does in other dropsical cases. Pain in the stomach on pressure is sometimes present.

Small Intestines. Borborygmus and rumbling are mostly observed. Pain is felt in some portion or other of the small intestines on pressure.

Liver or Spleen is not affected, except in those who suffered previously from malarious fever. Jaundice has never been observed.

Pancreas. In a few, on pressure over the region of the pancreas a dull pain is felt. *Enlarged mesenteric glands* are not observed.

Large Intestines. Sometimes there is pain in the region of the vermicular appendix. In the descending colon more or less pain is felt on presure. Rumbling is specially observed.

Stools. Diarrhœa is mostly present. Yellowish or yellowish green colour with mucus is the character of the evacuation. The number of stools are not more than six or eight in a day. In a few cases, hæmorrhage from the bowels forms the leading symptom. The stools are usually painless. When diarrhœa has been prolonged to ten or twelve days, haemorrhoids are felt in most cases. They cause pain and burning sensation. After recovery, the unpleasant sensation due to piles may last for a long time.

Heart. The cardiac troubles are rarely observed. Endocarditis may be present and at this stage many deaths ensue. Mitral regurgitation or any other form of organic lesion of the heart follows the endocarditis. In those cases where endocarditis appears, œdema of the lower extremities may come on to a slight extent. Palpitation on account of weakness is present as a rule. Dyspnœa on moving about or ascending stairs is generally observed. After every stool, on coming to bed, the patient is obliged to take rest for a short time to avoid the difficulty of breathing. The heart-sounds are generally weak, except in cases suffering from palpitation or bruit the sounds are loud. Functional murmurs are also observed.

Lungs are not involved; in some cases bronchitis may be present.

Kidneys. In most cases there is pain in the kidneys with or without pressure.

Urine. The secretion of urine is generally diminished. In almost all cases albumen has been detected. There may be excess of phosphate or oxalate of lime but their significance is not marked. The excretion of albumen forms a chief feature of the disease. Tube-casts have not been observed.

Upper Extremity. There may be slight swelling of the upper extremity. In a few cases the dorsal surface of the hand is more or less affected with œdematous swelling.

Lower Extremity. Oedematous swelling of the lower extremity forms a character of the disease. It commences from the dorsum of the feet and extends higher up to a portion of the abdomen. In some cases the external genital organs are severely involved. In a few, peritoneal dropsy of slight extent may be present. As in all anæmia, the œdema increases towards the last portion of the day. Though it is associated with the excretion of albumen, yet the fact does not hold so much importance as in other cases of albuminuria.

Much importance can not be attached to the patellar reflex, for it may be present or entirely absent.

Generalities. In mild cases, absence of fever is a general indication. In grave cases, fever is attended with enormous anasarca. In some cases, the insiduous nature of the disease can not be detected at first. In others, it runs a rapid course. Anæmia associated with diarrhœa is the most marked feature in the majority of cases. Doubt can be entertained whether any case of Epidemic Anæmia has been observed without diarrhœa and albuminous urine. Cases with heart-complication almost without œdema present the feature of loose evacuation and albuminous urine. Persistent œdema of the lower extremity is the general character in most cases.

Fever. In bad cases, fever of continued type with exacerbation is the leading symptom. Sudden coma and death may supervene in these cases. In milder types, evening fever may be present. According to the nature of the epidemic influence, absence or presence of fever forms the marked symptom. It may be said that no two epidemics are alike. Our observation of cases from 1878 to 1907, extending over a period of thirty years has confirmed the view that Epidemic Anæmia is a peculiar disease which may be associated with fever or not. Anæmia is the chief indication of the disease. It leads to diarrhœa and œdema in most cases, and in others to complications which end in serious troubles of the heart. Even in heart-diseases, diarrhœa usually accompanies.

Skin. Pale appearance of the skin is a necessary consequence of anæmia. Oedema gives it a puffy appearance. Oozing out of serum sometimes takes place from the genitals when they are much swollen up. Red blotches with irregular stripes are generally observed in œdematous legs. They are seen when the œdema has lasted at least a week. These stripes are more observed on the front part of leg than on the back. The feet do not, as a rule, participate in this discolouration.

Prodrome. Like beri-beri the onset of the disease is generally slow but it may be sudden. Free use of rice or other kinds of injurious diet, as fruit, etc., have given rise to sudden aggravation, the disease having avoided detection before. Bath increases the œdema which then attracts the notice of the sufferer. When fever is associated, its sudden aggravation by dietary misuse may hasten the fatal end. Such instances have been observed. In cases with slow progress and without fever, the attention is drawn by diarrhœa and slight œdema. In cases with heart-mischief, dyspnœa and palpitation make the patient extremely weak and deter him from work. As the diarrhœa, fever or œdema increases, the gravity of the situation is then understood.

In 1907, in a family of twenty persons, thirteen were suddenly atacked with diarrhœa, vomiting, scanty micturition and slight œdema of the legs. The head of the family, an educated man, ascribed the cause to milk. The cow which belonged to him was kept in the house with proper care. He was advised by a friend to change the food of the cow from mustard-cake to linseed-cake in order to increase the quantity of milk, the other things remained the same as before. A few days after the alteration of the cow's food, diarrhœa with œdema of the legs suddenly supervened. He also smelled a bad odour in the cow's milk which did not exist before. When we saw him during his first attack of diarrhœa, he said that he passed only one liquid evacuation of greenish-yellow colour, and vomited once, but that one stool and vomit prostrated him so much, that it was difficult for him to get out of bed. It should be said that he was a strong, hard working man, over fifty. The use of the milk of the cow was at once stopped. The other sufferers could not detect the cause of their disease, and consequently they had anæmia, scanty urine and œdema of the legs. They were all cured by a few doses of homœopathic medicines.

It can not be said that the linseed-cake was alone the cause. Perhaps some microbe coming in contact with the linseed-cake did so much mischief. It is a remarkable thing that the cow had diarrhœa after the use of the linseed-cake. The suggestive fact is that the new disease might have been origiuated in other cases from infected cow's milk.

Termination. Surely, these were mild cases. In grave form, the fever is generally associated. Effusion in the brain produces coma and death. The organic heart-disease is a serious mischief. The principal causes of death are increasing anæmia, diarrhœa, fever and serious heart-trouble. The proportion of mild cases is numerous in comparison to serious ones. This fact explains the curability of the disease in most instances.

Diagnosis. The differential diagnosis with other kinds of anæmia is manifest. Epidemic anæmia may be acute, or sub-acute. In the acute, the course is rapid. The anæmia almost begins with high fever with or without swelling of the legs. In the sub-acute, there is anæmia but fever may be absent. In a few days either dropsy or organic heart mischief sets in. Chronic course is seldom observed. Albumen with scanty urine is almost always present. Functional murmurs may be present in the two varieties.

In other kinds of anæmias, the high fever, organic heart diseases, and œdema of the legs are not regular characters as in epidemic anæmia. Albumen with scanty urine is generally absent in them. Oedema of the legs is a general feature of epidemic anæmia, whereas in other varieties it may be absent. Epidemic anæmia attacks many persons of the same house and a particular quarter seems to be affected. Other kinds of anæmias are neither epidemic nor local in their manifestation. As a rule a single person is attacked. Mild cases of epidemic anæmia associated with œdema of the legs recover by the administration of diuretics. It is not so with the other varieties. In epidemic anæmia, most cases are affected with diseases of the kidneys. The scanty urine with albumen is a leading feature. With other anæmias it is not so as a rule. Other anæmias lead a chronic course whereas the epidemic variety is almost without it.

Comparison with beri-beri. Now we have to look after beri-beri. Aitken in his Science and Practice of Medicine defines the disease thus : " A constitutional disease, expressed in the first instance by anæmia, and culminating in acute œdema. It is marked by stiffness of the limbs, numbness, and sometimes by paralysis of the lower extremities, oppressed breathing (anxietas in paroxysm), and a swollen and bloated countenance. The urine is secreted in diminished quantity. The œdema is general, not only throughout the connective tissue of the muscles, but throughout the connective tissue of solid and visceral organs in every cavity of the body. Effusion of serum into the serous cavities very generally precedes death."

To differentiate the above description with that of epidemic anæmia is not easy enough. There are confusing and misleading points which create great difficulty in their separation. Both of them commence with anæmia, though acute œdema is not always a character of epidemic anæmia. In epidemic anæmia, stiffness of the limbs, numbness and paralysis of the lower extremities do not exist; oppressed breathing may or may not be present, and bloated countenance is mostly absent.

Organic affection of the heart is generally absent in both. Though deficient secretion of urine is present in both the diseases, yet nothing is mentioned with regard to albumen in beri-beri. Oedema is not a constant symptom in epidemic anæmia, involving the connective tissue of muscles of the body. Endocarditis may be present in a few cases of epidemic anæmia but pericarditis has never been observed. Death in beri-beri is due to serous effusion in the cavities, whereas it is mostly absent in the other, excepting the brain. No case of death has been observed in epidemic anæmia from serous exudation in the pericardium.

Dr. Patrick Manson in his Tropical Diseases defines beri-beri thus: "Beri-beri is a specific form of multiple peripheral neuritis occurring endemically, or as an epidemic, in most tropical and sub-tropical climates and, also, under certain artificial conditions, in more temperate latitudes. The mortality is considerable, death usually depending on heart paresis."

Contrasting this with that of epidemic anæmia, the first and principal difference is that the latter does not belong to any form of multiple peripheral neuritis. The notable agreement among all authorities is the nervous character of beri-beri, whereas epidemic anæmia has no touch of it. The pathological nature of the two diseases is essentially different though some symptoms of resemblance exist.

With regard to the symptoms of beri-beri Dr. Aitken writes: "The majority of the phenomena which characterise the well-recorded cases of this disease are undoubtedly referable to *anæmia,* or to chlorosis, and by the Germans it is regarded as a variety of *pernicious progressive anæmia.* An impoverishment of the blood exists, with all the symptoms of serious anæmia. The debility and increasing prostration, the cold extremities, palpitation, dyspnœa on exertion, frequent, small, and quick pulse, the bruit ocasionally heard in the neck, the scanty urine, the torpid bowels, the deadly pallor of the tongue, all indicate a condition of anæmia (Evezard). The disease makes its advances in an insidious manner, as all forms of anæmia do, without any primary or well-marked train of symptoms; and the indisposition appears to be comparatively slight which exists as a stage precursory to the visible invasion of the fully expressed disease (Wright, Evezard). The approach of the final and characteristic features of the disease appears to be very gradually brought about; a constitutional state or diathesis is gradually established, and a form of anæmia sets in, combined with the cachectic dropsy of Andral—a condition allied to that of chlorosis in the female (Evezard). Pains and formication of the lower extremities supervene, the limbs become stiff, and motor paralysis at last comes on. At the same time the lower limbs become anæsthetic; and the anæsthesia gradually spreads over the whole of the cutaneous region, coinciding with muscular hyperæsthesia. The patient finally has anasarca, and effusions take place in the serous cavities. The body temperature is low (97·8° F.). The affection is essentially chronic; sometimes there is an apparent amelioration of the symptoms."

Further on—

"(1). The *acute, severe,* or *inflammatory form* is generally the culmination of the constitutional and local phenomena in a first paroxysm. Numbness, paralysis, and œdema of the extremities are the leading symptoms, followed by dyspnœa and oppression at the *præcordia.* For a short time previous to any other obvious symptom, the patient, though robust-looking, may not have been able to exert himself in consequence of the partial loss of the use of the lower limbs. This rapidly increases, till he finds that there is inability to walk, accompanied with œdema of the extremities, which very soon passes into general anasarca, affecting the innermost recesses of the textures—if such an expression may be permitted. Febrile symptoms are associated with this acute anasarca. The skin is hot and dry, the urine is scanty and high coloured, the bowels are costive, and the stomach irritable. There are rapid and full pulsations of the large arteries, while the pulse may be variable at the extremities, accompanied generally with dyspnœa and symptoms of effusion within the chest. In other cases there may be headache, restlessness, and delirium, with a slow and full pulse, indicating serous effusion and pressure on the brain. When the œdema is general, and becomes rapidly developed, the condition of blood is changed from its anæmic character. It becomes dark and ropy, resembling in some degree the appearance of the blood taken from a patient affected with cholera (Wright). (2). In the *second, asthænic* or *chronic* form of beri-beri, the patient is very often more or less worn out by some previous disease; or he may have had a previous acute attack, of which there may be a relapse; and it appears that men in whom the disease has once manifested itself are the more subject to future attacks (Christie), for it is found that one attack predisposes to another (Wright); and then the dropsical symptoms more generally resemble those observable after protracted fevers or other debilitating causes. Abdominal dropsy is most prevalent, accompanied with symptoms of general relaxation—a small and quick pulse, constipated bowels, scanty urine, loss of appetite, universal œdema, much pitting on pressure, and paralysis of the extremities. The heart partakes of the general debility. It is flabby, and the venous circulation becomes retarded. Soon, perhaps, it dilates, when a temporary bellows sound may be heard. After several such attacks and recoveries, the heart becomes thickened, and hence we have the *post-mortem* appearance of either a large and flabby heart, or of one eccentrically hypertrophied (Evezard). (3). In the *third* and *mildest form*, the patients are first attacked with some stiffness or rigidity of the legs and thighs, succeeded by numbness, slight œdema, and sometimes paralysis of the lower limbs. The œdema is in general limited, with slight pitting on pressure. There is no natural heat of the skin; the pulse is seldom above the natural standard; the urine is scanty; and the appetite unimpaired. There may be occasional palpitations of the heart, with costiveness, blanched conjunctivæ, flabbiness and paleness of the tongue, and whiteness underneath the nails. Although such patients generally say that they are well, they ackowledge a slight feeling of numbness and coldness of the extremities—symptoms which would readily disappear under appropriate treatment; but after a close night, with either a fog or a shower of rain, such a patient would apply for medical aid in the morning, with a scared aspect, sighing breathing, violent palpitation of the heart, sometimes with a diffused impulse, pain in the præcordial region, and a variable fluttering pulse. In such cases there are also dyspeptic symptoms, with acid eructations and puffiness of the stomach. The scanty and high coloured urine has an acid reaction when voided, shows a specific gravity of from 1025 to 1040, and contains an excess of urea."

In these cases, acute attack may ensue and the patient may suddenly die in consequence of embolism.

The description given by Dr. Aitken essentially differs from that depicted by Dr. Manson. Dr. Manson divides beri-beri into three varieties 1. Paraplegic. 2. Dropsical. 3. Mixed, paraplegic and dropsical. According to Dr. Aitken, dropsy is present in the three varieties, acute, chronic and the mildest types. Dr. Manson sees no dropsy in the paraplegic cases. The œdema of the legs is entirely absent. For all the differences, we think it proper to insert the observations of Dr. Manson. He writes; "*Paraplegic cases.* On examining one of the paraplegic cases, it will be found that, besides paraplegia of greater or lesser degree, there is a certain amount of anæsthesia or of numbness of the skin; particularly of the skin over the front of the tibiæ, the dorsa of the feet, the sides of the thighs, perhaps also of the finger tips, and of one or two areas on the arms and trunk. The visitor may be struck with the thinness of the patient's calves, the flabby state of the gastrocnemii; and by the fact that if, whilst making the examination, he should handle these and the neighbouring muscles somewhat roughly, particularly if he should squeeze them against the underlying bones, the patient will call out in pain and try to drag the limb away. The thigh muscles, likewise, may be found to be similarly tender, and so may the thenar, the hypothenar and the arm muscles; like the calf muscles, these two may be wasted and flabby. Very probably there is a loss of fat as well, the panniculus adiposus being every where very meagre. . . . . As a rule, all deep reflexes are lost; but the superficial reflexes, unless in extreme conditions of paresis and muscular atrophy, are usually present and more or less active.

. . . . . *The heart and circulation.* On inspection it may be remarked that the impulse is diffuse or is obscured by pericardial effusion; that there is epigastric pulsation; that the carotids throb too violently; that there is that peculiar wobbling, pulsating movement in the jugulars that denotes tricuspid insufficiency. . . . . On auscultation loud bruits, usually systolic in rhythm, may be heard. Marked reduplication of the sounds, particularly of the second sound, is to be noted. . . . . . It will be judged, that in addition to peripheral neuritis, there is serious disease in the circulatory system, particularly in its innervation; that there is dilatation of the right side of the heart, and that there is a state of relaxed arterial tension."

"*Dropsical Cases.* Instead of being thin and wasted, as the last patient, his face is puffy and heavy; his lips, possibly, are slightly cyanosed; and his arms, hands, trunk, legs, and feet are distended with œdema. It may be thought from the appearance of the œdema that it is a case of acute nephritis, and an examination with this idea may be made of the scanty, dark-coloured urine. But this is found to be of high specific gravity, and to contain no albumen, or only a mere trace; so that the case cannot be one of acute Bright's disease. . . . . Attention is now directed to the heart, and here a bruit is discovered, besides other evidences of dilatation of the organ and of arterial relaxation, just as in the first case. . . . . . . Kneejerk is probably absent. . . . . In this patient there are the same signs of peripheral neuritis and of dilatation of the heart as in the other case. In addition there is a somewhat firm œdema, which is not altogether cardiac, but, as its character and the circumstances in which it is found suggest, is probably connected partly with lesion of the nerves regulating urinary excretion, and partly with the play of transudation and absorption in the nutrition of the connective tissue."

"*Mixed Paraplegic and Dropsical Cases.* There is œdema to some extent, particularly of the shins and feet, about the flanks, sacral region, and, very generally, over the sternum and root of the neck. There is numbness of thighs, there is some ataxia, there is muscular weakness and hyperaesthesia—particularly of leg and thigh muscles, there is absence of knee-jerks, there is cardiac bruit and there are signs of dilatation of the heart and relaxed arterial tension."

The three varieties of beri-beri presented by Dr. Manson have peculiarities of their own. They differ from the types described by Dr. Aitken. Dr. Manson's case of paraplegia has heart-complication without œdema. Paraplegia is the remarkable feature. The dropsical case has more œdema than the former but heart-troubles and paraplegia less. His mixed case may vary in proportion to the three principal characters.

In Epidemic Anæmia, paraplegia is altogether absent. Oedema is a marked indication. Heart-mischiefs are also rare. Relapses from beri-beri often occur. The same fact with regard to epidemic anæmia has not been observed. Beri-beri may run a chronic course. The new disease as a rule does not. For these reasons, it will be inaccurate to call epidemic anæmia or dropsy by the name of beri-beri. Dr. Waring has recorded the following facts with regard to beri-beri in the Indian Annals of Medical Science, Vol III, 1856 : 1. *Ratio of attacks.* Among the native troops of the Madras army from 1829-38 more Mussulmans were attacked than Hindus. In one regiment 12·5 per cent. were Mussulmans and 6·27 per cent. Hindus. In another regiment 21 per cent. were Mussulmans and 8 per cent. were Hindus. 2. *Mortality.* Mortality among European soldiers was above 26 per cent. and that among the sepoys nearly 14 per cent. 3. *Influence of seasons.* It was observed by Malcolmson in 1831, that in the rainy season and especially towards its close, the admissions with beri-beri were far more numerous than at any other period of the year. Most attacks occurred from June to January. 4. *Epidemic occurrence.* Dr. Waring says: "The principal circumstance which marked the years 1833 and 1834 was a fearful famine which prevailed over the whole of the Southern India, when thousands died of starvation. This famine was caused by the total failure of the monsoon, or rainy season, and if we are inclined to suppose that these circumstances, namely, famine and drought, are sufficient to account for this sudden and mysterious appearance of the disease at Bellary and Cuddapah, we are at once met by the difficulty, that the failure of the monsoon, and the consequent famine was common over the whole of Southern India, and yet in no jail in Madras, hitherto exempt from its ravages, did the disease make its appearance." 5. *Paralysis more or less is the characteristic of beri-beri.* Out of 65 cases observed by Herklots in India, 60 had some kind of paralysis, œdema 40, tottering in walking 12, pain and soreness of the feet or hands 48, and numbness of the feet and hands in 57 cases. Serous effusion of some kind or other was present in 24 cases. Pericardium 4, pericardium and thorax 7, pericardium, thorax and abdominal cavity 6, brain and spinal canal 1, and brain alone 1. Comparing these cases with epidemic anæmia or dropsy, it will be observed that the latter has neither paralysis, nor numbness of feet. On the other hand, œdema of the legs is generally present. Effusion in either pericardium or thorax has never been observed. The sudden death from coma may be from the effusion in the brain.

(To be continued).

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

For the Month of January, 1908.

Date.	Barometer. (corrected.)	WIND.		TEMPERATURE.		Humidity.	CLOUD.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	30·106	N E	1·9	75·5	57·5	62	*Nil*	*Nil*
2	30·091	N E	2·0	75·2	56·5	72	”	”
3	30·095	N	2·6	74·0	56·2	59	”	”
4	30·133	N	2·1	72·2	56·0	69	4	”
5	30·169	N	1·0	74·8	55·8	70	5	”
6	30·139	N E	1·4	74·0	56·5	78	6	”
7	30·177	N E	1·5	73·6	57·6	66	*Nil*	”
8	30·179	E N E	2·1	75·0	56·8	61	”	”
9	30·161	E	1·7	75·2	56·0	57	”	”
10	30·145	Calm	1·0	75·2	57·0	73	”	”
11	30·116	E	1·0	77·0	58·0	86	2	”
12	30·067	N	3·2	78·8	62·0	95	10	0·47
13	30·044	E	3·4	67·8	63·0	95	8	0·17
14	30 067	E	3·3	69·8	60·0	91	*Nil*	0·12
15	30·108	N	3·8	71·5	57·0	85	”	*Nil*
16	30·108	N	3·7	70·0	56·5	85	”	”
17	30·108	N N W	4·3	72·0	53·5	87	”	”
18	30·115	N	4·6	69·8	51·0	90	”	”
19	30·076	N	3·7	70·0	52·0	83	”	”
20	30·052	N E	2·9	68·5	51·5	90	”	”
21	30 086	E N E	1·9	69·5	52·0	94	”	”
22	30·128	E	1·9	71·0	54·0	54	1	”
23	30.086	E	2·3	72·5	56·5	82	*Nil*	”
24	29·995	Calm	1·5	72·0	58·0	82	”	”
25	29·997	N	1·0	75·0	59·5	100	”	”
26	29·974	Calm	1·0	76·0	62·0	100	4	”
27	29·975	S	2·9	79·0	65·0	100	6	”
28	29·936	E	2·3	79 0	64·0	79	2	0·06
29	29·973	N E	3·1	79·0	60·5	86	*Nil*	*Nil*
30	29·910	Calm	1·5	74·0	58·0	80	”	”
31	29·861	E	1·9	76·5	59·5	89	3	”
Mean	30·070	E N E	2·3	73·7	57·4	81	2	TOTAL 0·82

Remarks: In the month of January, the mean atmospheric pressure was 30·070 inches. The mean direction of wind was

E. N. E., and its mean velocity was 2·3 miles per hour. The mean maximum temperature was 73·7 degrees and the mean minimum 57·4, shewing a difference of 16·3 degrees. The mean humidity was 81 per cent. The total rainfall came to 0·82 inches.

In comparison with December, there was further lowering of temperature. During December, the mean maximum had been 76·1 and the mean minimum 60·4, shewing a difference of 15·7. The mean humidity in December had been 74. In that respect the humidity in the month of January increased by 7 per cent.

In the week ending the 28th December, mortality from cholera came down to 40 from 119 in the week ending the 7th December. In the week ending the 4th January it was 49. In the week ending the 11th January it was 37. During the week ending the 18th January it was 27 and in the week ending the 25th January it was 23. It will be seen that there was a gradual fall of the mortality from the disease.

In the week ending the 28th December mortality from plague was 14. In the week ending the 4th January it was 14. In the week ending the 11th January it was 15. In the week ending the 18th January it was 13, and in the week ending the 25th January it was 16. On the whole the mortality from plague remained almost the same.

Mortality from small-pox shewed a slight excess during the month than that of December. The highest number of deaths was 16 during the week ending the 25th January. Otherwise the mortality never exceeded more than 8 in any week.

Deaths from fever during the month were on the increase. In the week ending the 28th December, the mortality came down to 147. In the week ending the 4th January it was 154. In the week ending the 11th January it was 162. In the week ending the 18th January it was 160, and in the week ending the 25th January it was 125.

Deaths from bowel complaints ranged from 79 to 100 in the month of January. It had been almost the same in the month of December.

In the four above mentioned weeks of January, the mortatality was 681, 729, 628 and 615, making a total of 2,653 deaths. The ratio of deaths during the period was 40·65. In the month of December it had been 46·65.

EDITOR'S NOTES.

Gnaphalium Polycephalum.

The *North American Journal of Homœopathy* for January writes: "On the intestinal mucosa and the cerebro-spinal system, producing neuralgic pains in the limbs. Its chief symptom is an acute pain in the sciatic nerve, sometimes with sensation of numbness on walking.

INDICATIONS—Sciatica. Chronic polyarticular rheumatism, especially of the great toe. Neuralgia of the upper jaw, intermittent, with occipital headache. Dysmenorrhea. Morning diarrhœa. Tuberosities in the skin of the face.

DILUTIONS—From tincture to the third."

Valeriana: a Drug Physiognomy.

The *North American Journal of Homœopathy* for January has the following:

"CHARACTERISTICS: Excessive nervous irritability. Hysteric temperament. Aggravation; from standing.

PAINS IN GENERAL: Tearing pains and twitching rheumatic pains here and there as from a quick pull, with drawing cramps appearing abruptly in various places. IN PARTICULAR; Headache, hemicrania. Frontal pain, at first in the right temple, tending to extend all over the head, with sharp, piercing pains in the eyes, with nocturnal agitation and bran-like sediment in the urine. Sensation of great cold in the head (vertex, sepia, veratrum). Sciatica, worse on standing or letting the feet rest on the floor (belladonna), on elevating the limbs when seeking a point of support; amelioration from walking, none from lying. Neuralgic pains in the toetips, as if ulcerated with sensation of cold air passing from sole to calf. Tearing, pulsative rheumatoid pain in the right calf on sitting. Sciatica of pregnant women. Pains in the heels when seated.

NERVOUS SYSTEM—Hypersensitivity of all senses. Great nervous irritability in general, with tremblings, cannot keep quiet. Individuals of changeable disposition in whom the intellectual faculties predominate. Mental confusion, responds incoherently (arnica, belladonna). Delirium, hallucination, sees figures, animals, men; thinks he is some one else who moves about the edge of the bed or in the room; thinks there are animals in bed with him trying to hurt him,

causing fear. Feels light, as if floating in the air (asarum, lac can.; as if legs floated, sticta).

Eyes—Amblyopia; burning, smarting in the eyes as from smoke; **with visual hallucinations such as half of the room appeared to be on fire.**

Ears—Otalgia from draught or cold.

Digestive Tract—Spasmodic constriction of the pharynx with sensation of a thread in the throat (on the tongue, natrum mur., silica); nausea, with desire to vomit. The attack is accompanied by weakness, pallid lips, cold body, and followed by vomiting of bile, and chills. Vomiting in infants, the milk in large curds (æthusa), after nursing, a mother suffering from anger.

Abdomen—Cramps and hysteric flatulence. Watery diarrhœa, with bits of curdled milk, expelled with screams, in infants. Intestinal spasms after meals and at night in bed.

Respiratory Tract—Suffocating cough when falling asleep. Spasmodic asthma with convulsive movements of the diaphragm.

Genitalia—Menses delayed and infrequent (pulsatilla).

Skin—Redness in certain regions, which then become pale (ferrum).

Fever—Of the continued type, typhoidal. Short chill with thirst. Heat predominates, with thirst, profuse sweat, especially on the face.

Relations—Compare; Asafetida, castoreum, crocus, ignatia, lac can., spigelia, sulphur."

Remedies in Shock and Trauma.

The *North American Journal of Homœopathy* for December, has the following important suggestions :

"In these conditions, having followed out indicated mechanical procedures, the homœopathic remedy takes first rank. Suppose we are called to a patient who, from some accident, lies unconscious, anæsthetic. No injection, for good luck, of caffein, strychnin, camphor oil or ether according to present fashions, is needed. The therapy must meet the exact indications and be individualized. Such cases may be divided into two great classes:

Class A. *Where the patient reacts not at all, or slowly and weakly.*

Arnica. A most important remedy in cephalic injury accompanied by insensibility, loss of consciousness. When consciousness returns, the drug must be continued if the patient lies with the head low, wants warm covering, if the whole body is cold except head and face which are not, if the pulse is slow and weak and if the patient fears approach of death. Aconite is alternated with arnica if fever be present.

CAMPHOR. Favors reaction; the skin is cold and clammy, the face and lips cold and blue; exhaustion is marked; diarrhœa is observed, also muscle-twitching, the pulse is weak, respiration slow; the patient lies in stupor, anxious.

GLONOIN. Skin cold, but not clammy, pulse slow and weak, reaction is taking place, but slowly.

CICUTA. Great lack of sensitivity; the cold face is deadly pale; hands, feet and legs are cold; the patient cannot swallow, and in spite of the great depression there is convulsion and sometimes delirium.

GELSEMIUM. Slow reaction, but the case remains stupefied, drowsy; he suffers from occipital pains, the irides are always dilated, the muscles of constriction and flexion are paralyzed.

LACHESIS. Apoplectic symptoms, the heart seems to stand still. The patient lies with lower limbs flexed on the body as much as possible; nose, ears, forehead and extremities are cold; he neither sees nor hears; pulse thread-like, nearly imperceptible; respiration labored; the stupor increases, with delirium and muttering, and a paralysis of of the left side may be noted.

LAUROCERASUS. The patient appears dead, pulse weak and slow, skin cold and bluish, respiration rattling, with sighing; there is trembling of the legs and involuntary stool.

CONIUM. Apoplectic symptoms. Tendency to collapse; dilated irides, pulse weak and slow. Delirium, trembling of legs, convulsions, limbs go to sleep, paralysis.

VIPERA. Pulse slow, weak and irregular, skin cold, with cold sweat, difficult deglutition, hemi- or monoplegia, vomiting delirium.

CLASS B. *The patient reacts violently.* Here we have four typical drugs:

ACONITUM. The patient cannot be quieted, all his senses are on edge, great unrest, wire-like pulse; he shivers if uncovered, swoons away when raised from the recumbent position; marked fever.

BELLADONNA. Red face, delirium, fever.

HYPERICUM. Face puffed, pulse rapid, respiration short; twitchings and shiverings through the whole body, he "shakes" with it; retention of urine, great nervous stupefaction, tonic cramp.

HYOSCYAMUS. Marked and rageful delirium in words and actions.

To this repertory may be added some indications particularly useful when the spinal cord is injured; also in two classes.

CLASS A. *The patient cannot walk.*

HYPERICUM. With great nervous depression, much vertebral sensitivity to touch, great pain from the least attempt at walking. Retention of urine with shivering and desire to urinate.

ARNICA. Spinal trauma with spinal hemorrhage; cold limbs, slow, weak pulse, nausea; partial paralysis with numbness of the limbs; pain worse from motion; symptoms better when the patient rests quietly.

RHUS. Paralysis due to spinal injury; extreme cold of hands and feet, muscle-twitchings, pain and numbness in the affected limbs.

CONIUM. Spinal trauma, paralyzed limbs feel asleep when trying to walk, or as if fettered about.

CICUTA. Paralysis with anesthesia, convulsive movements of the limbs, shivering with mental excitement and anxiousness, vesical irritability, constipation.

Class B. *The patient can walk, but the limbs are very weak.*

SULPHURIC ACID. Anuria. The weakness in back and lower limbs is so great that he cannot stand unsupported; violent pains in the limbs with tearing in the whole body; great pressure at the neck of the bladder, with anuria.

HEPAR. Cannot retain urine. Weak limbs with nervous depression, chills running from above downwards; very excited and irritable; vesical weakness".

In the first class of cases with imperfect reaction *Symphytum* should be added. It acts like Arnica, but the pains are distressing on account of the fracture.

Cobra is indicated in traumatic lesion when the respiratory centre is affected on account of the fracture of the base of the skull.

Phosphorus is suitable to severe vomiting in cases of injury of the brain, when the liquid is ejected after a short time and not instantly.

Taking into consideration the nature of the injury, with or without hæmorrhage, many medicines are serviceable according to their characteristic symptoms.

Polygonum Punctatum.

The *New England Medical Gazette* for January has the following note:

"Polygonum, smartwood, or arse-smart (arse is the good old Saxon equivalent of anus, and is found in the classic productions of Dean Swift *et aleia, q. v.*) is well reputed in domestic or country practice as a local application in internal inflammations, and has the rubefacient effect of a mustard plaster. It is also used locally in sprains, bruises, chronic erysipelatous inflammations and pruritus ani (whence its Saxon name.)

Its pathogeny presents several excellent clinical pictures, and before proceeding further we may note its predominant aggravation from cold and damp.

For example, acute cold in the head: burning in the eyeballs; dry sensation in the lids; inflammation of the edges of the lids. Inflammation and smarting, raw feeling in the Schneiderian membrane; tickling in the nose; frequent sneezing; red, inflamed nostrils, with swollen sensation; feeling of congestion through nose and eyes. Continuing down the respiratory tract, we find the throat dry, hot, burning, with sensation of excoriation; the glands feel swollen; there is aggravation from cold or moist air; contracted feeling in the throat after swallowing, followed by thirst. In the larynx there is a stifling sensation; laryngeal constriction; crowding and pressure about the larynx, with bronchial irritation; roughness as from mucous adherent to the larynx, producing a spasmodic hacking and hoarseness. The hacking cough is worse from changes of temperature, and there is a dry cough at night excited by tickling, prickling-tingling behind the sternum; dry sensation in the larynx when coughing. All these symptoms are worse in cold, damp weather, which starts most coryzas, laryngitis and bronchitis.

Then there is a clinical picture of acute nephritis and cystitis from cold foreshadowed in the pathogeny. A febrile state of alternate chills and heat; aching in the loins with pain about the left hip joint; tearing and drawing in the loins on exposure to cold, followed by lameness and soreness (muscular?), or pain in back, lower extremities, acute or drawing, as if constricting the hips. Here again we observe the aggravation from cold.

Gastritis and enteritis are also represented: Great thirst for cold water which excites nausea; nausea—as if proceeding from the small intestines, with coldness in the abdomen; burning in the stomach;

cold sensation in the stomach; pressure of clothes causes distress and there is pain on pressure followed by throbbing and distress; uneasiness in stomach and abdomen; burning heat in stomach and bowels; tympanitis, flatulent colic; cutting, lancinating griping pain in the abdomen with great rumbling, rolling upwards, causing nausea, vomiting, and a violent expulsion of liquid fæces; pain in the hypogastrium, rectum and anus. Diarrhœa is predominant, but may alternate with constipation. Straining at stool; the stool may be mucous and jelly-like, or fecal yellow-green or dark, hard lumpy. Urging with much fetid flatus; tenesmus. The rectum is studded with itching eminences—itching, burning piles. Pruritus ani.

In the limbs we note: Distension of the blood-vessels in hands and feet, and this brings us to the stimulative purpose—clinical—which we had in view. In a recent issue of the Annales de Medicina Homœopathica of Brazil, Dr. Diaz de Cruz says: "The chief object of the present writing is to emphasize a piece of information got in a conversation with Dr. Murtinho, not deducible from the pathogenesis of the plant nor found in Clarke's Dictionary of Materia Medica. Dr. Murtinho said that an old sailor had his entire body, exclusive of the trunk, covered with varices of many years' duration. The ancient mariner, who was an enthusiastic partisan of homœopathy, inquired if there was any remedy that could modify the condition; the doctor, with the honest sincerity of man of science, replied that there was little hope in a condition so chronic and extensive; his patient, however, insisted, and the physician though never having read of the virtues of Polygonum in varices, prescribed the remedy, under whose prolonged use the trouble vanished.

Hence to Pulsatilla, Hamamelis and Fluoric acid, the chief drugs in varicosis, should be added Polygonum.

Following out the same line of "varicosis" reasoning, Dr. Murtinho used Polygonum 5 in a case of piles with such success that he frequently prescribed it, abundant hæmorrhage being an indication. The writer also used it in the case of a multipara subject to frequent metrorrhages not yielding to the usual remedies, remembering that the gynecologists often attribute this condition to uterine varices. Polygonum I was given, a drop every two hours. The relief was prompt and complete."

CLINICAL RECORD.

Indian.

A CASE OF ERYSIPELAS.

By Dr. Prasanna Lal Kumar, l.m.s.

About the middle of November last, I was called to see a Hindu baby three months old. It was a well developed male child. He had been suffering from fever for two days and his temperature was 102° F. in the morning when I saw him. He had a swelling in the right axilla and the swollen part was red and hard. Bell. 3x was prescribed and it was continued for two days. I again saw the child on the third day. The swelling had shifted from the axilla to the deltoid muscle of the right arm. It was still hard but a little less red. The temperature now ranged between 102° in the morning and 103° in the evening. The urine was very scanty. Apis 6x was prescribed. Two days after when I saw the child again the temperature was 104° in the evening. The swelling now spread over the whole of the right scapular region from the deltoid muscle downwards, the part was hard and of a pinkish red colour. He could not move his right hand and was crying piteously. I was informed that he had been throwing up the mother's milk soon after nursing, and at night he had frequent attacks of dyspnoea.

The erratic nature of the inflammation and the colour suggested to my mind Puls., which was prescribed. It reduced the swelling within 24 hours and the child became quieter. The temperature gradually came down and in four or five days the child became all right.

Foreign.

AN INTERESTING CASE OF ECHINACEA.

My young son Ulrich, one year old, had been vaccinated in September, 1903. Immediately after vaccination he was given *Thuja* 8. D. Nevertheless after three weeks his whole arm was inflamed. The child had severe fever all night (39·5), owing to which I gave him *Aconite* and *Arnica,* after which the fever went back somewhat. In the morning the whole arm was bluish red and it could be seen that pus had already formed; to accelerate this formation I gave him *Hepar sulph.* 4. D. every two hours. Next morning after a restless night pus was discharged. During the day the child was more free from pain, but next day the fever was higher again. There was much discharge where it had broken open and it looked as if another place was also to break open. The whole arm was red and hard as stone. Now I gave him *Echinacea* tincture, two drops every two hours. At the same time I put on it compresses of *Echinacea* (twelve drops in half a cup of water). By afternoon already the child became more quiet and in the evening a diminution of the inflammation was noticeable. In two days the wound ceased to discharge pus and nothing remained of the inflammation but a hard spot on the arm, and also this disappeared in about a week, during which he had received *Echinacea* twice a day; at the same time the glandular swellings on the neck and the throat which had formed after vaccination, disappeared, so that the child was quite well again in two weeks.—*Homœopathic Recorder*, December 15, 1907.

CLINICAL CASES.

By J. Roberson Day, M.D. (Lond.).

Enuresis.

Jenny L., age 13, has had nocturnal enuresis for eighteen months with very strong-smelling ammoniacal urine. Been attending St. Peter's Hospital for twelve months, where she obtained no benefit.

She was a tall, fair, nervous girl with no definite physical signs except a post-nasal catarrh. *Puls.* 3x was prescribed. This was attended with some success, for she had no enuresis for five nights. The enuresis was chiefly in the first part of the night. *Sepia* 6 was then given, with no benefit, and subsequently Bell. 1x. On one occasion the mother told me she slept so heavily, it was quite impossible to wake her—"takes five minutes to wake her." In this heavy sleep the enuresis occurred.

This was a valuable hint for treatment, and I prescribed *Op.* 12.

The next report was enuresis occurred only twice in a week, and on the last visit her mother told me she had only had enuresis five times in a month, and she does not sleep nearly so heavily, and that this medicine had done her more good than anything.

Tubercular Disease of Pelvis and Discharging Sinuses.

Catherine H., age 6, came to me June 15, 1905. She had been under treatment at the Hospital for Sick Children (where she was twice operated on) since August, 1904.

When first seen she had a large scar in the left groin, which was the mark of the operation, and part of it remained open and discharging. There was also induration in the left ischio-rectal fossa, where an abscess was discharging, The spine was straight, and these sinuses led down a long way, as shown by the probe, towards the ilium, which was probably the seat of the trouble. The child was quite unable to walk, and as further operative interference had been proposed, the mother decided to try homœopathy.

I prescribed *Silica* 12 and *Tub.* 30. weekly.

The sinuses continued to discharge, but the general health of the patient greatly improved. On July 27th I gave *Calc. fluor.* 30.

She continued steadily under treatment, and in January, 1906, was so much better, as her mother said, "not like the same child." There were still three sinuses discharging in the gluteal region.

About two months previously she began to walk again, not having walked since July, 1904.

The sinuses continued to discharge, though in less quantity, and the one in the groin has healed up completely. *Calc. fluor.* 30 and *Tub.* 30 weekly were continued.

October 18, 1906.—She was exceedingly well, only having occasional discharge from the sinuses.

When last seen, October 21st, 1907, she was walking about to all intents and purposes a healthy child; occasionally there is slight watery discharge from the sinus, which opens and closes from time to time. She is still taking *Silica* and *Tub.* 30, but is practically cured.

CERVICAL CARIES.

Annie L., age 10, a bright girl with florid complexion and dark hair, came to me on July 4, 1904. She had been attending a dispensary for ten months previously, where she got progressively worse.

Her illness began with severe pains in the neck. I found there was a distinct enlargement to the left of the cervical spine, and the movements of the head in rotation to left and right were both restricted and painful. I prescribed *Silica* 30 *ter die* and *Tub.* 30 weekly, and ordered a poroplastic splint to give rest and support the neck.

She at once improved and lost all pain. This treatment was steadily continued, the *Tub.* being varied in dilution to 200 occasionally, and *Calc. phos.* 30 and *Calc. fluor.* 12 given as intercurrent remedies.

In April of 1906 I ordered the splint to be left off gradually—for three hours at a time daily.

On July 13th my note was: "She has now worn the splint for two years, and the spine appears perfectly healed. There is no pain and no deformity." The splint was now finally left off.

She has continued under observation ever since, taking occasional doses of *Tub.* 30. I saw her again to-day—November 8, 1907—looking the picture of health. She has no pain, and can move the head freely. She says if anything startles her it makes the neck throb. There is no deformity and only a slight thickening can be felt over the cervical spines. She is now returning to school.

TUBERCULAR DISEASE OF BONES OF HAND AND FEET.

Winifred B., age 17 months, was the second child in the family. The first child had died at six weeks old from wasting—the father was delicate. She was brought to me July 20, 1905. She was a very delicate, bottle-fed child, and for five months had been attending the Tottenham Hospital every day, where "they kept on operating but gave no medicine." The second finger of the left hand had been removed, and there were two sinuses leading down to the fourth metacarpal bone, which was diseased. There was also a tubercular nodule on the outer aspect of the right foot. *Silica* 12 *ter die* and *Tub.* 30 weekly were given.

By September 21st she was very much better; the nodule on the right foot had disappeared and only the sinus on the left hand remained, which appeared much better, and generally she was greatly improved. On November 9th she was attacked with griping, offensive diarrhœa, which so often occurs in these tubercular children, and *Calc. ars.* 6, three hours, was now given, *Tub.* 30 being continued in weekly doses. This was changed to the *Fluoride of Calc.* 30 on November 17th, and by December 15th she was very much better and more lively. The following March, 1906, *Silica* 30 was again prescribed, and shortly after her mother reported she was "in the best of health." She was trying to walk, and the foot continued quite well, although the sinus in the hand continued to discharge.

On October 12th the discharge ceased. For six weeks she had no medicine, and in January, 1907, she came again with a slight return of discharge. A further course of *Silica* 30 and *Tub.* 30 was given, and there has been no return of this discharge. The sinuses are perfectly healed, and the constitution of the child has immensely improved—in fact, she appears quite well, although a delicate child, bearing the scar of the amputated finger, the results of the Tottenham Hospital treatment.

HEADACHE CURED BY *Opium*.

Harold H., aged 6½, came to me November 9, 1906, for headaches which begin in the morning; he was very heavy and dull, and, to use his mother's expression, would sleep for days." The bowels were confined, his skin was dark and perspiring, he was thin, and had a morning cough. The sleep was disturbed by dreams. I gave *Opium* 12 *ter die.*

December 18*th.*—He was very much better in every way, and had only had one headache since attending. His mother told me he had derived more benefit from this treatment than any other, and "he had been under lots of doctors."

By February 1st he was quite well, of a better colour, sleeping naturally without dreams, and his bowels acted naturally. Every one noticed the change in him.

URTICARIA.

Ros. P., aged 2¾. An anæmic, flabby child, with an enormous rickety head measuring 21½ inches in circumference; was constantly troubled with an urticarial rash, which prevented sleep from the extreme irritation.

On one occasion his mother brought him to me in great distress; the rash was so bad that his nights had been very disturbed; there had been no sleep for him or his parents. Itching spots appeared, which quickly became vesicles, varying in size from that of a pin's head to a split pea or even a Barcelona nut.

I prescribed *Rhus tox.* 3, two hours. The effect was magical. To use the mother's words "this medicine worked marvels with the irritation; no new spots have appeared since taking it. He is sleeping well, waking only once in the night or not at all."

CONSTIPATION, &c.

Joseph, L., aged 67. Was recommended to me by a patient who had suffered in a smaller way and been cured. He came on March 9, 1907. Had been ill six to seven years on and off. He had a loathing for food, was very constipated, and always had to take aperients. His heart troubled him with palpitations and flushes. The nights were worse than the days, waking up every hour. Headaches were constant. His disposition has completely changed; from being always optimistic he had become pessimistic; so great was his depression that when staying at Bournemouth, whither he had been sent by his medical adviser, he even consulted the railway time-tables to ascertain the cost of conveying a corpse to London. He had always lived a temperate life, was married, and had one daughter aged 44.

He consulted Dr. F.; had taken *Hydrochloric acid*, ***Bismuth***, and purgatives. Had been put on a milk diet—five pints a day.

Physical examination: The abdomen was much distended with flatus, which rolled about him. There was no pain or tenderness or abnormal signs. The saliva was acid in reaction. The heart sounds were clear, but its action was disturbed by the flatulence.

I prescribed *Lycopod.* 12 *ter die* and enemata, if necessary, instead of purgatives.

I examined the urine and found it loaded with amorphous urates, but no sugar or albumen.

March 20*th.*—I changed prescription to *Nux. v.* 30, and *hydrastis* *ϕ*. ♏v. every morning.

April 8*th.*—He was sleeping better and reaction of saliva nearly neutral.

I now gave *Nux v.* 12 and *Graph.* 12.

April 22*nd.*—He was sleeping well. In May he had no discomfort after food, and was sleeping very well, and his "nerves" were much better.

June 4*th.*—Expressed himself feeling well, and able to attend to business without fatigue.

July 15*th*—Saw him for the last time perfectly well.

These successes in practice are always most welcome and gratifying; they keep alive our *faith* in our methods of prescribing as first enunciated by the immortal Hahnemann, and which with every succeeding year grows deeper with similar and repeated experiences.

These experiences I hold in common with you all, and I fancy I can hear you capping each case as I have related it with one of your own more brilliant one.—The *Homeopathic World*, January 1, 1908.

ARTEMISIA ABROTANUM FOR PARALYSIS.

By A. M. Cushing, M. D. Springfield, Mass.

When I made a proving of *Artemisia abrotanum* some 35 years ago it produced threatening symptoms of paralysis, even caused me to drop the reins when driving (and I usually drove horses that called for considerable attention); but for various reasons neglected the remedy. A case. A lady of about 65 (in whose family more than one had died from "shock," but I never could learn particulars) had been troubled with neuralgic pains in left foot. Some six months ago the right ankle became limp, tipped over if she stepped on it and the toe dropped, and she had to use both hands to move the limb, with pain in upper portion of the sciatic nerve. I tried to keep the toes and foot in place by plasters and braces, prescribed remedies with no help. Then strychnia and electricity were tried with no benefit. Two months ago I prescribed *Artemisia abrotanum* 30x. Now the ankle is weak but she walks around the house with a cane and is not troubled with pain..—*Homœopathic Recorder*, December 15, 1907.

A FEW CASES OF ARTERIO-SCLEROSIS.

By Dr. Granow Frnkfurt, A. M.

From a lengthy and very interesting ariticle on this subject we excerpt the following as most suitable for our columns:

We will now consider what can be done with this disease after it has developed. I am sorry to have to confess that there is really no remedy against it. Nevertheless the remedies at the disposal of the homœopath are far better and less harmful than those used by allopaths. While the latter have nothing else but *Iodide of Potassium, Digitalis, Morphine* and *Opium*, there are quite a number of homœopathic remedies which often develop a surprising action. I will illustrate this with some casos from my practice:

I. In October, 1905, I was called at night to an army officer of high rank, who had retired from service. As soon as I came near his room, I heard his groaning and calls for help. I found an old gentleman, sitting rather than reclining in an invalid chair, and panting for air. He continually begged me to take away the pressure from his heart as else he would have to suffocate; that it was terrible. His skin and his whole body were cold and covered with clammy perspiration. I prescribed hot baths with mustard for his hands and feet, and made warm compresses for his heart and his head. Internally I gave him *Camphora* 3. and *Atropinum* 5., in alternation every five minutes. Soon an improvement set in. In the course of two hours he was warm again and gratefully pressed my hand. The action of the heart had again become normal. Later on he received with benefit *Cactus* I. I may here add that the officer had received five large bottles of *Iodide of Potassium* from an allopathic colleague; but they had not proven of any use.

II. The second case is that of a lady of advanced age; I treated her for five years. She often had attacks of stenocardia, which I always combatted effectively with *Coffea,* and this because my patient even while in great distress was mentally very active and heard voices out of former times, showing great vivacity and living much in her memory. The after effects of these attacks were effectively treated with *Nux vom.*

III. The third case is that of a cabinet-maker, who was also my patient for a length of time. He never was a drinker, nor could he live in luxury, because he had to care for a large family. He has always been obliged to work hard and continuously without being able to take any vacations. His attacks always commenced with burning on the chest, which I successfully combatted with *Ars. album* 5. But often I had to combine with this *Apis* 3., especially when brain symptoms showed themselves. Once I succeeded in totally aborting the attack with *Tabacum* 3.

I will now yet briefly mention the application of water. In arterio-sclerosis we may use with advantage partial ablutions, rain-water of varying temperatures, wrapping the body with a wet sheet, compresses around the calves, rubbing with a wet towel and douches on the back. But we can give no general rule for such applications, but this must be determined by each individual cases. Baths in carbonated water, followed with a massage of the whole body, also prove useful. A patient who suffers from arterio-sclerosis should never drink more than three pints of water.

In conclusion, we would say that a patient should lead a very moderate life, avoid the excessive use of alcohol and be moderate in eating.—*Homœopathic Recorder,* December 15, 1907.

Gleanings from Contemporary Literature.

THE DIAGNOSIS OF SMALL-POX.

By A. E. THOMAS, M.D., D.P.H.,
Medical Officer of Health of Chester.

THE existing lull in the incidence of small-pox affords an appropriate occasion for considering anew its clinical complex and diagnosis, and for recording, and possibly fixing, the lessons learnt during the recent epidemics. The opinions which follow are based on a large number of cases. When new they are tentatively advanced to promote discussion—they are not necessarily meant to stand as permanent ineradicable landmarks. It is proposed to take first the various signs and symptoms in order, emphasizing those points upon which further information is sought.

Incubation Period.—This is generally given as from ten to twelve days, and oftenest twelve; but may be as short as six days, and as long as twenty.

Invasion Period.—The signs and symptoms of the invasion period are, to my mind, always well marked, even in mild cases, and in those rare examples of the disease when the closest scrutiny fails to detect the presence of the distinctive rash. They are in part or whole always present. Text books, it is true, describe the invasion period as one which may be attended with little or no discomfort, and may even pass unobserved. I have never met with this type of the disease.

The earliest sign is generally a chill, a rigor, or, in children, a convulsion. Following this there may be:—

1. Fever rising rapidly—possibly to 103° F., or higher, on the first day, with the usual febrile concomitants.

2. Headache—generally intense, frequently frontal and very early; it may even precede the chill.

3. Pain in the back and loins—usually severe and persistent, and present in nearly 75 per cent of the cases. This is of special diagnostic importance, not because it is characteristic of small-pox, but because it is so infrequent in other actute infectious diseases. In small-pox, then, it is very common, it is severe and persists. In hæmorrhagic small-pox it may be extremely intense.

4. Vomiting, with or without epigastric pain or tenderness—this may be extremely severe and intractable in hæmorrhagic cases.

5. Vertigo—which may be early, and is chiefly felt when sitting up or getting up from the dorsal position.

6. General aches and pains, chiefly in the knees and legs.

7. Muscular weakness and soreness.

8. Uterine irregularities—premature menstruation, and in pregnant women premature delivery and abortion.

9. Prodromal rashes.

The initial signs and symptoms are no criterion of the severity of the impending attack; they may be most severe, and yet the subsequent course of the disease prove mild and trivial.

Given, then, the presence of an epidemic of small-pox, the history of exposure to the infection ten or twelve days—preferably twelve days—

earlier, a contact which develops severe persistent headache and backache, combined or separately, and early high temperature, should be at once isolated or removed to a shelter for further observation. The shelter accommodation may be provided by a local authority under Section 15 of the Infectious Disease Prevention Act, 1890. During the invasion stage, and before the appearance of the prodromal rashes, the diagnosis has to be made from :—

1. Other infectious diseases having an acute onset, e.g., measles, scarlatina, typhus, influenza, and depends primarily upon (a) Presence of an epidemic ; (b) History of exposure with the appropriate incubation period. (a) and (b) in all cases.

In the case of the diseases indicated below, the following points should be considered ;—

Scarlatina, with rash absent or missed.—Condition of tongue, cervical lymph glands, tonsils, nose discharge, injection of soft palate (exanthem), circum-oral pallor, history of vomiting and sore throat. Backache absent or slight.

Measles.—Coryza, photophobia, lachrymation, Koplik's spots. Backache absent or slight.

Small-pox.—Headache and backache intense and unremitting. Vomiting may be present.

Typhus.—Backache not very pronounced. Headache intense, and very often associated with painful and tender eyeballs. Facial characteristic : face rather dark red, conjunctivæ, injected eyes look heavy, expression dull and apathetic. Great and early muscular weakness. Vomiting uncommon.

Enteric Fever.—Although this has not an acute onset, many cases are, when small-pox is rife, notified as small-pox. Attention should be paid to (a) Gradual rise of temperature at onset—step ascent on chart ; (b) Early epistaxis or deafness not uncommon ; (c) Widal reaction—this may be absent ; (d) Tympanitis ; (e) Condition of tongue, spleen, stools.

Chicken-Pox.—Complete absence of prodromal illness save in adults, when this stage may be moderately severe. Rise of temperature, if present, and the appearance of the rash almost simultaneous.

Influenza.—Here the diagnosis may be impossible until the time interval for the appearance of the rash has passed. The muscular soreness and prostration are both generally much more exalted in influenza than in small-pox. The history of exposure and the presence of an epidemic are of special importance here. The bacillus may sometime be isolated from the sputum.

Meningitis.—The history, with the presence of a possible cause, e.g., suppuration of the middle ear, or tuberculous focus in a lung, is important. The subsequent course, with the attending palsies, generally soon clear up the issue. Backache is uncommon.

Cerebro-spinal Meningitis.—Retraction of the head. Rigidity of the neck muscles. Kernig's sign. Possible presence of the bacilus in the nasal discharge or in the fluid obtained by lumbar puncture.

Cerebral tumour. Acute nephritis. Acute rheumatism. Acute gastritis. Lumbago. Anæmia. Eye-strain.

In this last series, all of which have during epidemic prevalence been mistaken for small-pox, the diagnosis may usually be easily made by attending to the usual text-book descriptions. Thus, in eye-strain, which may be attended with intense headache, the temperature is not raised, there is no backache or vomiting, and the headache, usually supratrochlear or occipital, is induced by work or reading, and remits in twenty-four if the cause is removed, to return again when work or reading is resumed. There is the history, too, of many previous attacks over a prolonged period.

During the stress of an epidemic, it is not at all uncommon to get any ailment which is associated with headache or backache, even when chronic and in existence for years, suspected of being small-pox and presented for diagnosis. The number of these causes, which may be found in any text-book on diseases of women, precludes their adequate discussion in this paper.

Initial Rashes.—These generally appear on second day of the fever and may be erythematous or petechial, or both. The first kind often disappears within forty-eight hours, and may resemble measles or scarlet fever.

The *morbilliform variety* is very irregular in distribution, is flat not elevated very ephemeral, and does not exhibit the systematic invasion of the body from forehead to feet shown by measles proper. It may be generalized at the outset, or restricted to certain areas. It is commoner than the other kind, and more frequently ushers in attacks of varioloid.

Scarlatiniform Prodromal Rash.—The distribution of this, though often irregular, resembles that of scarlet fever. It may, however, be confined to certain areas, such as the trunk, thighs, groins, or extensor surface of the legs. It is frequently associated with petechiæ.

Hæmorrhagic Rashes (Prodromal). These, as Simon has shown, are often localized to certain fairly well-defined sites—the lower abdomen, the groins, the inner surfaces of the thighs, the genital regions, the axillæ, and the sides of the thorax. They usually, but not always, indicate that the succeeding attack will be severe. These rashes may or may not be associated with one or other of the two prodromal rashes already described. The diagonsis has to be made from :—

1. *Measles.*—It does not yet seem to be sufficiently recognized in text-books that measles may be preceded by three types of prodromal rash : (a) Scarlatiniform : this is the commonest variety, its distribution may be irregular, and not confined to the trunk and limbs; unlike scarlet fever it may, and often does, invade the face; (b) and (c) Papular—resembling in distribution with varicella or small-pox, or an irregular distribution suggesting the presence of both.

2. *Scarlet Fever.*—In both these diseases the diagnosis is made from a consideration of the prodromal signs and symptoms, the presence or absence of headache, backache, vomiting, sore throat, enlarged cervical glands, coryza, Koplik's spots, and the other details already given ; the distribution, duration, progress, and movement of the rash, its associated rash, the history of an epidemic, exposure, and the appropriate incubation period. A short delay will often decide the question of measles ; the prodromal papules of measles later become flatter and shade off more into the surrounding skin. The papules of small-pox, on the contrary, become more raised and more firm.

3. *Septic Rashes*, associated with "closed suppuration" in the body, e.g., in middle ear disease, or appendicitis. The petechial prodromal rash has not been distinguished from the various conditions described in text-books under Purpura Hæmorrhagica, and associated with various causes : (1) Infectious diseases ; (2) Toxæmias due to drugs—KI, KBr, quinine, ergot, and others ; constitutional affections, e.g., tubercle, cancer, Bright's disease ; (3) Neuropathies ; (4) Arthrites.

The Rash.—The stage of invasion lasts forty-eight to seventy-two hours or more, and then the eruption becomes manifest. With the appearance of the rash the fever subsides, but this remission may not be very marked for one, two, or three days. Simultaneously the headache and backache cease, and the patient's general condition improves; he passes from a state of *malaise* to a state of *bien aise.*

This coincidence of three factors (the remission of the fever, the appearance of the rash, and the establishment of *bien aise*) is a most remarkable feature of small-pox, and one of its cardinal characteristics, and of great value in its diagnosis. The rash then appears about the third day of illness, dating the onset from the chill, and is generally first seen on the forehead, temples, and wrists, and spreads rapidly, first to exposed surfaces and then invades the scalp, neck, forearms, hands, back, upper arm, breasts, legs, and feet. Occasionally, especially in very young children, the rash may be first seen on the trunk.

The rash at first consists of minute pink-red spots hardly appreciable to the touch becoming later of a darker colour. Few at first, increase both in number and size, so that in twenty-four hours they are papular. The increase in number continues for two or three days. At first always discrete, they may later become confluent, so that it frequently happens that a case which, when notified, is described to the friends as discrete and mild, after a few days' stay in hospital may prove confluent and severe. When mature the papule is hard to the touch, and possesses the so-called shotty attribute. When fully established the distribution is characteristic; it is well marked on the forehead, face, and wrists, the exposed parts, and may be confluent here. It is less numerous on the trunk, upper arms, and thighs. It is rarely, if ever, confluent on the trunk. The incidence on the exposed parts is probably due to the greater vascularity of these sites, for the same profusion may be seen wherever the skin has been irritated or congested, e.g., by the constriction of garters, the application of plasters or tincture of iodine. This explanation is more or less borne out by comparing the distribution in animals.

Sheep-pox.—Rash first seen on the inner side of the legs, then on the cheeks and lips where bereft of wool, the nude portions of the body; the anus and under surface of the tail may also be involved, and later, more or less the whole of the skin.

Horse-pox.—Site of election the fetlock joints of the hind legs, perhaps because these parts are most exposed to injury, and therefore more vascular.

Cow-pox.—Always confined to the udder or its base.

To return to man, the rash is practically always unsymmetrical, and after the first day or so every pock is, with respect to its age, more or less at the same stage of maturation. Thus the lesions first to appear on the face, arms, and legs may be vesicular, while the later papules on the trunk are not. So the face may be pustular while the legs are still chiefly in the vesicular stage. While the general distribution is characteristic, it has other features no less well marked.

Defining the rash-distribution—intensity, as the number of papules per square inch of skin surface. This is least on the abdomen, and increases progressively as we approach the exposed parts from the trunk. Diagrammatically, the intensity of distribution of the arm and hand would be represented by a triangle, whose apex was at the shoulder and base in the palm.

The hypochondria are very frequently free from the rash, or if present it is sparse. The anterior abdominal wall as a whole has the least number of papules per square inch. The dorsal surface of the hand and wrist is more thickly affected than the ventral. The intervals between the toes seem to be in a large number of cases rash-free.

Mucous Rashes.—The rash is not confined to the skin, but may be found early on the mucous membrane of mouth, nose, fauces, and larynx, giving rise to sore throat and dysphagia. Small red points may be found on the buccal mucous membrane very early, becoming a little elevated later. The mucous rashes do not have the same stages of evolution—of papule, vesicle, pustule—as the skin rashes; they develop into superficial ulcers.

Vesiculation.—On the third or fourth day of the eruption the earliest sign of vesiculation appears. By the fourth or fifth day all the papules have become vesicular save in some mild cases of varioloid, where the papules may abort. The vesicle is very firm and hard, as hard as the papule it supplanted: when small it is almost conical, when large, hemispherical. Its contents are almost pearly yellow, and there is a red areola. A large proportion, but not all, of the vesicles become umbilicated, chiefly on the forearms and backs of the hands; so some, but not all, become separate. These septa do not persist, but disappear shortly before or after pustulation. Neither umbilication nor the formation of septa is of much value for the purpose of diagnosis. The edge of the vesicle is never wavy or crenate, whereas in chicken-pox the crenation may be marked.

Pustulation.—The vesicle becomes pustular about the sixth day, and the areola at the same time is now dark red. It is at this period that the face, eyes, lips, and nose become so much swollen that the features are unrecognizable.

Meantime though the face may be pustular, the trunk and legs may be papular; there is a wave-like progression in the sequence of the development of the rash. In the hands and feet, the pustules which form beneath the epidermis give rise to very great pain, and later from the hard lumps known as "seeds." There may be delirium, leading even to suicide or homicide during the three stages, but is generally most pronounced, if present, during the papular and vesicular periods. With the onset of pustulation comes, too, the secondary fever of suppuration, commencing generally on the fifth or sixth day, lasting indefinitely and depending on the extent of the rash.

Involution of Rash.—First noticed when the swelling of the skin subsides, and occurs primarily on the face, appearing elsewhere in the order of the evolution of the exanthem. At this stage may be seen the secondary umbilication due to the rupture of large pustules and consequent sinking in of their centres. Those pustules which do not rupture become dry, flat, slightly convex, extremely hard, and of a dark mahogany colour, exhibiting sometimes the former umbilication. These crusts are of great value in diagnosis. Upon the palms and soles they resemble reddish brown lentil seeds. and are shelled out by patients.

Decrustation.—The drying of the pustule gives rise to the shedding of the crusts and scabs, a process which takes about three or four weeks. When shed, the subjacent skin is red, becoming later darker, and finally brown or coffee coloured. The scars are white in four to six months. The pitting of the scars is not necessarily of diagnostic value, inasmuch as similar pitting may occur as a sequel to any severe attack of acne.

The above represents, as far as is useful for diagnosis, the progress of events in a discrete attack of small-pox—in the confluent form the signs and symptoms are the same, but more marked, more intense—save that the temperature in the confluent form, with or after the appearance of the rash, is not so early nor so great.

Mild Small-pox in persons not previously vaccinated.—Some persons are said to be immune to small-pox; in other, although unvaccinated, there may be six or twelve papules, which may not proceed to vesiculation or pustulation. The invasion period is generally well marked.

Varioloid.—In this form the secondary rise of temperatnre may be absent or very slight. The invasion period is well marked. though possibly slight in degree. Prodromal rashes are common. Some of the papules may abort. The maturation of the papules is earlier. The pustules are often conical and not hemispherical as in the unmodified form. The disease runs a milder course, and is of shorter duration.

The diagnosis of this variety depends upon the presence of an epidemic, the history of exposure, the appropriate incubation and invasion periods, the fall of temperature and establishment of *bien aise* with the onset of the rash, the character and the distribution of the rash.

Small-pox without a rash.—This sometimes occurs; thus, a man fell ill with what was called a "bilious attack," but on the fourth day pronounced to be small-pox, and removed to hospital. From the eleventh to the thirteenth day after his removal, the rest of the family, consisting of his wife, son, and daughter, fell ill with another "bilious attack," with high fever, backache. and headache. Three and four days later in all three the temperature fell considerably and the constitutional signs disappeared. The daughter now had a well-marked small-pox rash, the son had a few papules on forehead and wrists, the mother, however, even on the closest scrutiny, showed no sign of a papule or any other form of rash on the skin or mucous membranes. She was now vaccinated, and although she had not been vaccinated since infancy, forty-four years previously, the operation was unsuccessful.

Hæmorrhagic Small-pox may be of two varieties: (1) Hæmorrhagic from the onset; and (2) Secondarily hæmorrhagic into the pustule or its antecedents.

Primarily Hæmorrhagic Small-pox.—The incubation period is often short—five to eight days. The pain in the back and loins is excruciatingly severe. Vomiting and epigastric pain are prominent and intractable. The rash generally appears first on the trunk and legs, and last in the face. There may be hæmorrhages from the mouth, nose, lungs, kidneys, and even the uterus. The temperature, as a rule, is not high. It may, and occasionally does, occur in the vaccinated as well as in the unvaccinated.

Cases are often included in the death returns under purpura hæmorrhagica. During an epidemic, therefore, every household in which a death has occurred from purpura hæmorrhagica should be visited for the discovery of unrecognized cases of small-pox.

Secondarily Hæmorrhagic Small-pox.—The second variety is merely a special kind of, or the result of a special complication of the ordinary small-pox, and therefore need not be further described. After the appearance of the rash, small-pox has to be diagnosed from the following.

In all stages: Chicken-pox, acne, syphilis, drug eruptions, glanders, scabies, lupus, especially of the face.

In the papular stage: Prodromal rash of measles, erythema nodosum, lichen planus.

In the vesicular and pustular stages: Herpes, erythema iris, and erythema bullosum.

In the pustular stage: Impetigo, and pustular scarlet fever.

Chicken-pox.—The incubation period is longer than in small-pox —thirteen to nineteen days. The invasion period, save in adults, is practically absent. In adults it may be moderately severe and lasts for twenty-four hours.

Generally speaking, the first thing noticed is the rash, so that when the mother says, "I didn't know the child was ill until I saw the spots come out on the body," her statement goes a long way towards the determination of chicken-pox.

Constitutional Disturbance is mild in chicken-pox—grave in small-pox. It is not at all uncommon to find cases of chicken-pox which have passed through the attack with the temperature not exceeding 99° F. It sometimes happens that in a specified instance the data at one's command may be negative, or may be insufficient to base a positive opinion thereon. In these cases the amount of constitutional disturbance is a very important consideration. One asks the question: "Is this case, when all is taken into account, a grave affection or a mild one?" and calls it small-pox in the one, and chicken-pox in the other.

Rash Distribution.—In small-pox, the face, hands, and feet are specially attacked, the trunk only slightly; in chicken-pox the trunk chiefly, the face and limbs only slightly. There is one other type of chicken-pox, chiefly found in adults, in which the face distribution may be nearly, if not equally, as intense as that on the trunk. This variety is distinguished from small-pox by the profusion of the trunk exanthem. The palms and soles may be attacked in chicken-pox as well as in small-pox, but never to the same extent as in the latter. If, therefore, there are a large number of papules on the palms or soles, or both, the diagnosis is in favour of small-pox. Later the chicken-pox rash comes out in distinct crops, so that we may have papule, vesicle, pustule, and scab all present at the same time on the same patient.

General Character and Progress—In chicken-pox the papule becomes vesicular within twenty-four hours, in small-pox in seventy-two hours. The chicken-pox vesicle is soft, often unilocular, thin-walled, easily ruptured, varies very much in size in the same patient, and frequently has a wavy crenated edge. In the intercostal regions the chicken-pox vesicle are often eliptical, with the long axes running in the direction of the ribs. They rarely show umbilication, save in drying. Owing to the fact that they are easily ruptured, the base of the vesicles dries and shows early a depressed or cupped scab, sometimes even on the first day. These early cupped scabs are most characteristic and almost diagnostic. The small-pox vesicles are hard, nearly all of the same size, are mostly umbilicated, frequently multilocular, and are ruptured with great difficulty. Many of the papules in chicken-pox abort, in some cases the majority of them. This is recognized by the laity, who define two kinds of chicken-pox—chicken-pox proper, in which the vesicles are very few or none, and the water-pox, or glass-pox, in which they are plentiful. The chicken-pox vesicle tends to spread laterally much more than small-pox, so that the resulting scar may be often much wider, but of course not so deep or so much pitted. The small-pox vesicles, being hard and frequently separate, are ruptured with difficulty, so that early cupped scabs are very rare.

These and other differences between chicken-pox and small-pox are associated with the site of the irritant focus in the integument.

In chicken-pox this primary pathological focus is in the epidermal layer; in small-pox it is well in the corium or true skin.

Thus the greater depth of the initial skin lesion in small-pox explains: (1) the shotty character of the rash; (2) the pearly yellow contents of the vesicle, the colour being due to the thicker epithelial covering; (3) the hardness and hemispherical surface of the vesicle; (4) the absence of the crenated edge in the vesicle. This is possibly damped out by the thicker layer of epithelium, just as the several layers of an onion hide the irregularities at the core; (5) the absence of early cupped scabs owing to the difficulty of rupture; (6) the pitting; (7) the thickness of the crusts; (8) the presence of "seeds" in the palms and soles; (9) possibly the umbilication and the formation of septa.

The superficial position of the lesion in chicken-pox explains: (1) the moderately soft character of the rash; (2) the clear transparent, almost colourless, contents of the vesicle, due to the very thin epithelial covering; (3) the soft and sometimes spherical or ellipsoidal surface of the vesicle; (4) presence of crenation or puckering in the vesicle; (5) early cupped scabs; (6) the absence of pitting, save in severe cases; (7) the thinness of the crusts; (8) the absence of "seeds" in palms and soles.

Further the progress of the two diseases may be associated with the position of the lesion in the skin; in chicken-pox, with its superficial localization, the early rupture of the vesicle, and the poor lymphatic transport facilities of the epidermis, little toxin is probably absorbed. In small-pox, owing to the deeper position of the focus, the vesicle is not ruptured, and the lymphatics are present in greater abundance to absorb the toxin. That this is not merely a theoretical consideration is seen in those cases of chicken-pox where the lesion extends deeper, as, for example, in varicella gangrenosa; these may give rise to extensive scarring and even pitting.

Crops.—Chicken-pox comes out in crops for several days, and the rash may co-exist as papule, vesicle, puckered vesicle, pustule and scab. The small-pox rash comes out in one crop in one to two days, and invades exposed parts first, and covered parts later. Owing to this, the rash on the face and wrists is, in regard to evolution, a little in front of the rash elsewhere.

Sequence of Events.—In small-pox the rash passes from papule to crust in about twelve days; this interval may be as short as six days. In chicken-pox it rarely exceeds four days.

Crusts.—In small-pox these are thick and hard; in chicken-pox they are thin and easily broken. The presence of "seeds" in the palms or soles is characteristic of small-pox.

While the foregoing details in most cases will enable a diagnosis to be made, it must be confessed that there is no one characteristic sign on which absolute reliance can be placed; for example, absence of umbilication, and absence of septa formation in the vesicle is no indication that the case is not small-pox. It often becomes a question in one's mind whether the case is one of moderately severe chicken-pox or mild small-pox. In such circumstances it is well, after full consideration, to decide first of all whether the affection is a trival one or a grave one. In the latter case it should be vaccinated and treated as small-pox; in the former, vaccination also if the doubt persist, and treated as chicken-pox.

Acne.—This by itself rarely gives rise to difficulty, but when complicated with other affections, e.g., granular kidney, the associated headache or lumbar pain may prove very puzzling.

The absence of exposure to small-pox, the absence of the invasion period and the attending illness, the presence of blackheads, the history of previous outbreaks, the distribution on forehead and shoulders, the absence of the sequence from papule and pustule, with the recognized time intervals, are in favour of acne; whereas the appropriate analogous signs or their opposites are in favour of small-pox. Cases of varioloid in persons already the subject of acne generally give the history of exposure, the appropriate incubation period, the prodromal three days' illness, the appearance of a *new* rash, with the concurrent remission of temperature and the establishment of *bien aise.* It will generally be found that in these cases, although they have had many outbreaks of acne before, that this is the first occasion on which they have had to lie up or keep in bed.

Syphilis.—History of exposure may be obtained in one or the other, and in syphilis the original chancre, its scar, or the usual secondaries may be recognized. In the male, where there is no chancre or its scar, the urethra should be examined for its presence.

Mode of Onset.—In syphilis, slow, insidious, the fever is not high, nor are the constitutional signs urgent or severe. There is no initial chill, no backache; the headache, if present, is not severe. The patient is able to go about his daily work; he does not lie up. The temperature does not remit with the appearance of the rash—there is no feeling of *bien aise.* In small-pox there is a sudden onset by chill, early high temperature, severe backache and headache, often vomiting. The patient lies up at home and stops work.

Rash.—In syphilis this takes many days to appear; in small-pox twenty-four to forty-eight hours. In syphilis there is no remission of temperature, no establishment of *bien aise.* The distribution of the syphilitic rash may be like, or unlike, that of small-pox. It is generally more copious on the trunk than on the face, and is rarely found in the soles and feet. The rash of syphilis is polymorphic, and may exist as papule, pustules small and large, or vesicle concurrently. The pustules and vesicles of syphilis are usually conical, with deep subjacent ulceration; they are not flattened hemispheres as in small-pox.

Progress.—The regular sequence from papule to vesicle to pustule, with the proper time intervals, is present in small-pox, absent in syphilis. In the latter the development of the lesions is most irregular and slow.

Drug Eruptions, especially iodides and bromides.—In these there is the absence of the invasion period, the absence of fever (unless pustulation is present), the irregular distribution of the rash, and its irregular and often indolent evolution.

The history of the drug-taking cannot always be obtained; the vehicle may be a "blood mixture" or a much-advertised "fit cure." It is well, therefore, to make enquiry as to these specifically. The bromide and iodide rashes are generally found where there are sebaceous glands; by these the drugs are partially excreted. They are, therefore, absent from the palms and soles.

Acute Glanders, with inoculation and invasion periods of two to three days..—The patients are usually stablemen. The nasal mucous membrane may be soon involved, with the attendant abscess and ulcer formation, and mucopurulent rhinorrhœa. The disease generalizes, and there is an eruption of papules on the face and at the joints. The cervical lymph glands become greatly enlarged. The diagnosis is usually made from the condition of the nose and the cervical lymph glands; the bacillus may be isolated from the blood, the pustules, or the nasal discharge. When the papules are developed there is no remission of temperature with the usual concomitants seen in small-pox.

Scabies, Lupus, and Impetigo are mentioned to be borne in mind; at epidemic times they are sent for diagnosis. This usually presents no difficulty. In the *papular* stage, small-pox has also to be distinguished from—

Erythema Nodosum.—This is common over both tibiæ and ulnæ. The papules are flat-topped and come out in crops for about seven days. They may soften, but never suppurate. There may be some slight malaise and pain in the joints, so much so that the disease is often said to be associated with acute rheumatism. The fever is slight and the diagnosis, as a rule, easy.

Papular prodromal Rash of Measles, and Lichen Planus.—The first has aldeady been considered, and the second offers no difficulty. In the *vesicular* and *pustular stages* from *herpes*; this must not be forgotten, it is usually easily recognized.

Erythema Iris.—This is generally symmetrical, which small-pox rarely, if ever, is, and affects the backs of the hands and fingers, the insteps and knees; the face is generally spared. It may come out in crops. At first a small papule, then vasicular with a pink areola; the fluid is soon absorbed from the centre, leaving a dark red depression, surrounded by the rest of the vesicle, giving rise to the appearance of variolous umbilication. The duration of this affection is, roughly, two weeks.

Erythema Bullosum.—This is a more severe variety of the foregoing, and has the same initial site, characters, and distribution as erythema iris. There is central bullæ, and around this a ring of smaller vesicles, enclosed possibly by a second and even yet a third ring of vesicles. These rings may suppurate and induce severe scarring. It is occasionally notified as confluent small-pox.

Scarlet Fever.—It sometimes happens that in scarlet fever the red points constituting the rash become the site of secondary infection and develop into pustules. The original rash is then taken to be the prodromal rash of small-pox and the pustules the true exanthem.

The history of the case, the distribution, and the time relations serve to make the diagnosis clear. The condition, however, opens up an interesting speculation. It is said that the pustulation in small-pox is due to the essential organism of variola; the presumed cytoryctes, and in support of this it is pointed out that in the early vesicles, and even the early pustules, it is difficult to find the ordinary pyogenic cocci, even on culture or by inoculation. But the same is true, to some extent, of the vesicles and pustules in herpes, injury due to burns, and erythema iris. It may be that at first the small-pox toxin present prohibits the growth of the pyogenic cocci—these are acknowledged to be present later.

The investigation has other consequences; the analogy with scarlet fever, not only in the pyogenic infection of the rash, but the almost rise of temperature in the third week, associated with the nephrites when present, seems to be analogous to the secondary fever of suppuration in small-pox, and suggests that in the latter, as in the former, the subsequent complications are due to pyogenic cocci, and furthermore, that with the evolution of the rash, the specific organism of small-pox sinks in the background, and the streptococci and staphylococci come forward. This has a bearing upon treatment, inasmuch as, if well founded, it would be a rational procedure to inject cases of small-pox during the early period with serum derived from mixed cocci.

Vaccination.—Is this of any value as an aid to diagnosis? I think not. There are rare cases on record in which patients efficiently vaccinated have subsequently passed through undoubted attack of modified small-pox within a few months.

The possible consequences of even one unrecognized case of small-pox set free are so appalling that any uncertain criterion must be ruthlessly discarded. On the other hand, I have never seen a case of small-pox which could be successfully vaccinated within two years of the attack. We want to know the interval between a case of small-pox and the possible subsequent successful vaccination. Second attacks of small-pox are known, so that it is quite legitimate to assume that small-pox patients may be at some later period successfully vaccinated.

It has been stated that if vaccination is performed within three, or even four days of exposure to small-pox, the threatened attack will in all probability be aborted. More definite information is required, too, on this head, so that the possibility of successful vaccination may become an efficient help in diagnosis. It is not at all uncommon in small-pox hospitals to see small-pox and vaccinia run parallel courses simultaneously in the same patient.

Diagnosis in later years.—Here the pitting, the distribution, and the presence of scars on the soles and palms are significant, as also are nebulæ or old lucomata on the cornea. It is curious that Sydenham should hardly mention the eye complications in this disease, though Rhazes (10th century) states: "When the signs of small-pox appear, we must take very great care of the eyes."

Sources of Error in Diagnosis.—

1. Inaccurate history, e.g., former alleged attacks of small-pox. Too short or too long a period intervening since exposure.

2. Relying too much on the presence of vaccination scars, even when performed a few months previously. Their presence does not justify the exclusion of small-pox.

3. The formation of septa in the vesicle, estimated by pricking with a needle along the periphery. In small-pox the vesicles are said to stand, but in chicken-pox to collapse, being unilocular in the latter. This is a most unsatisfactory criterion and quite unreliable.

4. Presence or absence of umbilication—this too is no sure guide.

5. Being satisfied with the existence of a cause sufficient to explain the existing clinical complex without making sure that the cause thus presumably ascertained is the actual and effective agent—the *causa causans.*

In order to avoid this, it may become necessary in cases of difficulty to examine the various systems (digestive, cutaneous, vascular, etc.) in fuller detail and methodically.

In conclusion, although the diagnosis of small-pox is at times easy, there are occasions upon which it is most difficult, and no one sign is to be absolutely relied upon. Cases such as acne with granular kidney, chlorosis with backache, septic rashes from causes unascertained, syphilis in a rheumatic subject, a case of cerebral tumour, taking KI or KBr. with vomiting—all these may be most misleading.

In cases where small-pox is present, however, it is often found that though the patient admits having had previous attacks of the same kind, yet the present is the first occasion on which he has for this cause abstained from work, laid up at home, or "had a doctor at home."

I wish to acknowledge my indebtedness to the writings of Ricketts, Wanklyn, Osler, Welch, Taylor, and Schamberg, and others from whom I have consciously or unconsciously borrowed.—*Public Health,* January, 1908.

Acknowledgments.

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COLLARGOL AS A HOMŒOPATHIC MEDICINE.

Collargol is a metallic preparation which contains 86 per cent. of silver. The chief authority on the use of Collargol is Dr. P. Jousset, who has tried the medicine for a long time. The orthodox school administer it as an intra-venous injection or by the mouth. Dr. Jousset uses it by the mouth and he is for it. He has performed a few experiments on rabbits. They are as follows :

Two rabbits received daily sub-cutaneous injections 1 c.c., to 4 c.c., of an aqueous solution of Collargol with the potency of 1 in 10. The one died on the 9th and the other on the 17th day, the two having diarrhœa during these days.

Of the other two rabbits, one received an aqueous solution of Collargol of 1 in 10 by the way of stomach; on the first quarter of the first day, it had 2 c.c. followed by 4 c.c. up to the twentieth day of the experiment, and in the last week 6 and 8 c.c. It succumbed on the 24th day. Ths second rabbit received the same solution given at first in the same doses, but at the end of the third week 6 c.c., 8 and 10 c.c. in the fourth week and successively 15,20,30,50,90 c.c. up to the 43rd day when it died.

Of the four rabbits, three had diarrhœa, and one had it not during the experiment. This rabbit died on the 43rd day and was treated with considerable doses of Collargol.

Macroscopic lesions during autopsy. The rabbit no. 1 of the first series which succumbed to sub-cutaneous injections on the 17th day of the experiment, had been infected by the first injection and presented an enormous abscess at the point of injection. The organs appeared healthy except the kidneys and the intestines which were excessively congested.

The rabbit no. 2 of the first series which died on the 9th day from the subcutaneous injection of Collargol had no abscess, but the small intestines, the kidneys, the liver and the lungs were very much congested.

The rabbit No. 1 of the second series which succumbed on the 24th day from ingestion of Collargol presented considerable macroscopic lesion; the small intestines in its one-fourth different places had a strong prominence of the Peyer's patches; two of the patches were ulcerated in their centre, the sides of the raised patches were perpendicular to the base of the ulceration, having cut the muscles. The lungs were œdematous and the kidneys congested.

The rabbit no 2 of the second series which succumbed on the 43rd day from the action of Collargol given by the way of stomach presented the following lesions: The intestines and the stomach were highly congested like the kidneys; the jaundiced liver was besprinkled with black spots.

In short, the macroscopic lesions were surcharged with the action of Collargol in the intestines, the liver, the kidneys and the lungs. The intestinal lesions were strongly manifest in the rabbits which had received Collargol by the way of stomach.

The following are the histological examinations by M. L. Hermitte.

Rabbit no. 1 treated with Collargol by sub-cutaneous injection:

Macroscopically: The liver was very much altered. It had peri-hepatitis, and thickness of the capsule of Glisson. The separation came from the enormous sclerous lesions, bands and adhesions around the dilated biliary canal. The heart was small, the kidneys appeared healthy.

Microscopically :

Liver. The biliary canals were for the most part dilated, the epithelium was multiplied by several layers of cellules. They contained an albuminous and granular subtance. The walls of the biliary canals were above all distinctly thick, sometimes infiltrated with embroynic elements (small round cellules). Around the biliary canals, the observer is struck by the abundance of the conjunctival tissue. On the cuts, coloured by the method of Van Gieson (Acid picric and Fuschine), he verified the large patches of dark red colour by the sclerous lesions, at the centre of which he was able to observe one or many biliary canals. In the middle of a like patch of sclerosis, the portal veins and hepatic arteries were not altered and affected by the process.

It is the same with the sub-hepatic veins which were entirely normal. The peri-biliary patches had thick conjunctival supports which radiated toward the hepatic lobules adjacent to and following the slit of Kiernan; in each case the bands of sclerosis could not cut ór divide a hepatic lobule or never could dissociate the cellule of the lobules which they separated.

The hepatic cellules which were contiguous to the above-mentioned conjunctival bands might be of normal aspect, slightly modified, flattened, bruised, laminated or some of them enveloped by very small expansions of the conjunctival band.

As to the structure of the conjunctival tissues, it was like that of the adult state, that is, with long voluminous fibres and little of nuclei.

In the bands of sclerosis biliary pseudo-canalicules (as in the intoxication by Hgcl 2) were observed. These pseudo-canalicules result from modifications carried by the sclerous tissues in the hepatic cells united by them. They existed as numerous and voluminous islets thus constituted.

1. At the centre, by a granular mass resulting from destruction of hepatic cellules.

2. At the periphery, by an envelop of conjunctival tissues thick in the middle which could be ascertained by some bundles of hepatic cellules and also by the biliary pseudo-canalicules.

Kidneys. The small lesions, which were observed, were perhaps due to cadaverisation; they were met with in large number of autopsies made after twentyfour hours. *Without interstitial lesions.* The vessels were absolutely normal. Glomerules of Malpighi were intact without modification of the capsule of Bowman. The excretory tubes were normal. The secretory, the contorted tubes and the large loops of Henle presented slight modifications. Near the tubes having their habitual dimensions, their epithelial covering remained normal, in others the epithelium was modified. The cellules were flat, diminished in height by half and sometimes more. In the interior of the tubes, by increased light, some hyaline or granular bands were observed, but not cylindriform.

Stomach. Slight sclerosis of the superficial part of the mucous membrane. The gastric glands were well preserved in their deep parts; on the contrary at their termination the cellules were badly coloured, the nuclei were invisible and the mouths of the glands were separated by conjunctival tissues.

Intestines. The glands were covered by a proliferation, extremely surcharged with round and lymphoid cells. The follicles of the intestines were very much hypertrophied and portions disappeared by the glandular elements.

In places the glands were destroyed at least two-thirds internally and it remained in the portion which rested on the muscles. This sort of ulceration was rather visible and covered by the hypertrophied lymphoid tissue.

The muscular coat was nearly always preserved in places; nevertheless in places it was infiltrated with round elements but the quantity was small.

Rabbit no. 2. Ingestion of Collargol.

Macroscopically. The liver and the kidneys were healthy. The lungs were congested; one of the two presented a whitish zone and was enough resistent.

Histological examination. Liver. Peri-biliary cirrhosis was also more marked than in rabbit no. 1. The biliary canals were dilated and had considerable thickness of the walls; the cavity was situated on full fibrous lumps, whose expansions radiated towards the neighbouring lobules, following the slit of Kiernan. The biliary epithelium was not much altered; multiplication of the epitheliary elements was observed, but this was of moderate extent. In the middle of the sclerous islets, a few biliary canalicules appeared. The sub-hepatic veins were dilated but these were not injured. The portal veins and the hepatic arteries did not present notable modifications.

Kidneys. No appreciable lesions were observed. Trifling modifications of the contorted tubules, analogous to those described in the rabbit no. 1. Interstitial sclerosis was not observed.

Intestines. Hypertrophy of the lymphoid follicles was not observed, but notable exaggeration of mucous secretion of the intestines was present. Most of the glands were distended by mucus which was thick on the surface of the mucous membrane and formed a layer. The glands were not injured.

Stomach. Thick mucus; the gastric glands were rich in dark cellules (cellules of the edges). No lesions in the glandular cellules or interstitial tissues were observed.

Lungs. In places œdematous lesions. Congestion. Infiltration of the alveolar walls by the round cells. The alveolar walls presented dilatations of blood-vessels and in places they were infiltrated with blocks of bloody pigment.

EPIDEMIC ANÆMIA.

(Concluded from p. 61).

Epidemic Dropsy as stated by Dr. McLeod. In a paper written in the Transactions of the Epidemeological Society, London, New series, Vol xii, Dr. McLeod has given his experience of the new disease. Dr. Manson has made a summary of the paper and he does not include it within beri-beri. Epidemic dropsy has been defined as follows :

"A specific, epidemic, communicable disease running its course in from three to six weeks, and characterised by the sudden appearance of anasarca, preceded in most instances by fever, vomiting, diarrhœa, or by irritation of the skin; and often accompanied by a rash, by fever of a mild, remitting type, by disorder of the bowels and by pronounced anæmia. The case mortality varies from 2 to 40 per cent., death being sudden and depending upon œdema of the lungs, hydrothorax, hydropericardium, or other pulmonary and cardiac complications."

Our observation differs from that of Dr. McLeod in many respect. He makes anasarca an all-pervading complaint, on the other hand, we do not hold the same view. The accompaniment of rash was not the character of every epidemic and it did not exist in every case. Doubt is entertained whether it is a kind of scorbutic eruption or anything particular of the disease. Sudden œdema of the lungs, hydrothorax and hydropericardium have not come under our observation. Anæmia is pronounced in all cases.

Geographical distribution. Dr. McLeod believed it to have appeared in the cold weather of 1877-78, 1878-79 and 1879-80. Our observation on the epidemic visitation remains the same.

The disease occurred in Shillong and Assam in 1878; at Dacca 1879; Sylhet 1878-79. It is supposed that the disease had been carried from Mauritius in 1878, as it broke out there in severe epidemic form during that time.

In this spread of the disease there is great difference with beri-beri, which is essentially a disease of the East Asia.

Symptoms. Dropsy, fever, diarrhœa and dysentery were common according to Dr. Mc.Leod. Dr. Harvey noticed two cases of doubtful paretic symptoms. The occurrence can be disregarded at present being doubtful.

About circulation and respiration, weak, slow, irregular pulse and cardiac bruits were noticed.

"Signs of pleural and pericardial effusion, of œdema of the lungs, of pneumonia, and of cardiac dilatation were common in Calcutta."

"*Anæmia* was usually present and marked; so were wasting and prostration." The urine was rarely albuminous.

"*An exanthem,* erythematous on the face, rubeolar on the trunk and limbs, was frequently seen in Mauritius, less frequently in Calcutta."

Taking a brief survey of the facts recorded by us, they differ in many respect with those stated by Dr. McLeod. Any how it is certain that more observation is necessary to come to a correct observation of the disease. So far it can be said that whenever the disease happens, it breaks out in an epidemic form. Dr. McLeod was of opinion that it was a new disease, and not connected with beri-beri.

Aetiology. Epidemic Anæmia like beri-beri has no consideration for sex or person. High or low in rank may be affected by the disease. Any occupation may fall within its scope of work. Children under five have not been observed to suffer from this disease. Perhaps, it is so with beri-beri. According to Dr. Waring, most cases of beri-beri happen from June to January, but many between September and November. Dr. Manson is not exactly of the same opinion, though he holds that outbreaks occur during the rainy season. "In countries which are hot all the year round beri-beri may appear at any time; most frequently, however, in such climates it appears during the rains."

With Epidemic Anæmia, cases have been observed during winter and not during the rains. Both the diseases, epidemic anæmia and beri-beri, take place in epidemic form. While the latter may be observed in all the months of the year, the former has been prevalent only during winter.

In considering the range of the disease sufficient experience is wanted to come to a conclusion. The new disease has been found in and near Calcutta, while beri-beri is prevalent in the tropics as well as a portion of the temperate zone of the East.

Like malaria and beri-beri, epidemic anæmia attacks in an insiduous manner. The general symptom in all the three diseases is anæmia. In malaria, there is anæmia with slow or high fever. In beri-beri, fever may be absent, but anæmia, paraplegia and œdema are present. In the new disease, anæmia, œdema and diarrhœa favour the progress of the disease. All these facts clearly manifest the presence of a microbe. With beri-beri it is said to have been discovered by Tsuzuki, and called *Micrococcus beribericus.* Tsuzuki after his experiments has come to the following conclusion : "Injection of the soluble toxin or the endotoxin of the coccus produces characteristic changes. Two main forms of the disease result, viz., a cardiac and a paralytic form as in the disease in man. Further the post mortem changes in these two forms are believed by the author to be identical with those of the human disease." Epidemic anæmia claims a micro-organism of an allied type for its insiduous progress and seasonal influence.

Treatment. Many things can not be said with regard to treatment. In mild cases with œdema and without fever, having diarrhœa as the principal symptom, medicines to check diarrhœa should be the first treatment. *Pulsatilla* has generally succeeded. Other medicines according to their characteristic symptoms are resorted to if Pulsatilla fail. *Croton, Veratrum, Podophyllum, China, Carbo veg,* etc., have given satisfaction in particular cases.

After cessation of diarrhœa, diuretics are required. *Canth., Terebinth., Belladonna, Apocyanum, Apis,* etc., have proved efficacious.

In cases with fever, the first aim should be to get rid of the fever. *Bell., Gels., Verat. alb., Verat. v., Puls., Calc. carb.,* *Ant. c., China*, etc., according to their symptoms have been found useful. In cases of high fever, no regular method of treatment can be suggested. For, in these cases large number of deaths happen from coma. In fact, the bad state may be considered like typhoid fever. After 1878, there were not many occasions to treat the high fever cases which occur in this disease. Hope is entertained that many recoveries will follow from the recent knowledge of homœopathic practice.

. The organic heart-lesions, including dilatation of the heart, are dangerous symptoms. Though these cases are rare, yet the element of danger remains the same. In palpitation, anæmic murmur, or any other kind of functional disorder, various steps to cure may be resorted to, as they generally do not prove dangerous or fatal.

As for anæmia, suitable selection of medicines and diet are necessary to steer clear of the disease.

DYSENTERY.

(Continued from p. 503.)

CARBO VEGETABILIS. *Stools. Enveloped by filamentous yellowish mucus, this mucus is entirely bloody in last portions of fæces.* Bloody mucus passes instead of stool. Discharge of blood with every stool. Diarrhœa brown, yellow or slimy of a putrid odour, often involuntary. Frequent involuntary stools of putrid cadaverous odour; general collapse. Much putrid flatus. After Arsenic, if there be cold breath, cool skin, terribly smelling discharges, general collapse. *Sloughing dysentery* with cadaverous smell mixed with blood.

Rectum and Anus. Stitches during stool. Gnawing when not at stool. Crawling and complaints of ascarides. *Tenesmus.* Ineffectual urging; only wind passes, with pressure in rectum. Swollen painful hæmorrhoids. *Bleeding during stool* (Sulph.). Glutinous, musty, exudation at night. Acrid, corrosive moisture. *Passage of mucus, with urging. Burning after stool.* Perineum sore with painful itching when touched.

Accompaniments. Eructations (Phos.) after eating and drinking. *Distension of abdomen. Offensive flatus.* Disorder from high living, and especially butter-eating. After ice-cream or in water. Restlessness and anxiety in the afternoon, from 4 to 6 p.m.

Remarks: The principal character of Carbo Vegetabilis is that it proves generally efficacious when the patient is without fever. In cases of dysentery with fever Carbo Veg. rarely gives relief. In sloughing or hæmorrhagic dysentery, it should be tried, but much hope is not entertained of its success in the sloughing form. On its failure Lachesis or Crotalus should be administered.

CARBOLIC ACID. The leading indications of Carbolic Acid are stools of bloody mucus, like scrapings of the intestines, often involuntary, putrid, black, thin, dark with vomiting of dark green substance. It is a medicine for sloughing dysentery, but has peculiarities of its own. It is not known that it has ever been tried.

CHAMOMILLA. *Stools. White, slimy mucus with colic. Green, painless, consisting of fæces and mucus. Green watery* (Puls., Grat., Mag.). *Hot, smelling like rotten eggs.* White and yellow mucus. *Green slimy mucus.* Changeable colour. Undigested. Stools chiefly at night, with slimy, and whitish or greenish fæces, or mucus mingled with excrement like eggs when beaten up; or hot, corrosive fæces, of a fœtid odour, like rotten eggs; or evacuation of undigested substances. In children during dentition. *Before stool* colic. *During stool* colic. *After stool* cessation of colic.

Rectum and Anus. Urging to stool after eating and rising from sleep. Blind or bleeding hæmorrhoids. Hæmorrhoids with painful fissures and ulceration in the anus.

Accompaniments. Eructations. smelling like bad eggs (Sulph.). Pressure in the stomach after eating a little. *Emission of flatus.* Intermittent pain with flatulence in the hypochondria and stitches through chest. *Griping-tearing in the region of navel and lower down on sides with pain in small of back as if* *broken.* Flatulent colic. *Dysentery or diarrhœa with colic after anger. Children cry much and are pacified by being carried about. Peevish* children. *Aggravation during dentition.*

Remarks. It is more a medicine for children than for adults. Chamomilla is applicable to cases of dysentery with green, yellow or white stools mixed with mucus and cutting colic. With children it has produced marvels with changeable stools.

CHINA. *Stools. Chocolate coloured of a terrible, cadaverous smell, worse at night. Slimy mucus, passing frequently with biting-burning pain in anus, and colic before and after every stool.* Undigested fæces with mucus. Blackish stool with mucus. Yellow stools with colic and mucus. Cadaverous smell. Putrid slimy, watery, yellowish diarrhœa. Involuntary discharges.

Rectum and Anus. Sticking during stool mixed with blood. Sensation of an acrid substance during stool. Burning with burning-itching. Crawling. Creeping. Discharge of lumbrici. Tingling in the anus.

Accompaniments. Indifference to eating and drinking, but the natural taste for food returns after eating. Eructations. Soreness at the pit of the stomach with pain as from pressure on a sore place. Distension of the abdomen. *Fermentation from fruit* (Ars., Bry., Puls.). *Aggravation after milk.* Emission of offensive flatus (Carbo veg.). Rumbling in the abdomen. Fever. Voracious appetite is rare in dysentery.

Remarks. China has proved successful in many cases of dysentery. Indeed, it is effective of final cure when the slight mucus discharge does not disappear by other medicines. Fever is an accompanying symptom. Discharge of lumbrici may be effected by the medicine when it is a cause of the complaint. Aggravation from fruit or milk is another indication. In patients suffering from fever, its use is strongly recommended.

CHININUM ARSENICOSUM. *Stool.* Fæcal particles mixed with mucus and blood preceded and followed by tenesmus. Watery, blackish stools with mucus, and pain in the hypogastrium. Thin, brown, painless stool with mucus and blood. Liquid, brown with jelly-like lumps, pain in the iliac region when walking. Stools watery, fœtid mixed with blood. Nausea during stool with retching.

Rectum and Anus. Violent urging to stool. Sudden urging. Tenesmus. Belching, then urging to stool.

Accompaniments. Hiccough and belching, followed by urging to stool. Sudden indescribable general nausea, with flying heat and waning strength. Colic below umbilicus with urging to stool. Aching around navel and in ilium. Colicky pains better by pressure. Fever.

Remarks. Chininum Arsenicosum is chiefly applicable to cases where the disease prolongs without giving the final convalescence. The urgings are leading indications in cases when the disease has become sub-acute or begin as such. It is generally used after China.

CHININUM SULPHURICUM. It is a well-known fact that severe forms of hæmorrhagic diarrhœa especially originating from malaria can be cured by Sulphate of Quinine. This form of the disease is reckoned as the exaggerated form of dysenteric diarrhœa. It would not be discreet to accept the bloody flux due to hæmorrhoids. The profuse blood is mixed with the stool. The flow from hæmorrhoids may be associated with this state of the disease. The blood comes in drops before and after stool. But the hæmorrhagic fæcal flow is different. We have observed this kind of hæmorrrhage in severe cases of malarious fever. In a few, there may be bilious vomiting associated with hæmorrhage from the stomach. These cases generally yield to the administration of Sulphate of Quinine. It would be wrong to say that moderate doses of Sulphate of Quinine have no good effect in some varieties of malarious fever.

CINA. *Stools. Diarrhœa of white mucus in little pieces like pop-corn. Reddish mucus.* Mucus streaked with blood. Changeable stool with mucus and blood. Greenish slimy mixed with blood. Yellow watery with blood. Involuntary. Frequent. Colic during stool.

Rectum and Anus. Stitches during passage of flatus. Passage of round and other worms. Itching of the anus.

Accompaniments. Great hunger soon after a meal (China, Carbo v., Nux v.). Desires many and different things. *Vomiting of mucus. Pinching or cramp like pressure transversely across, in region of the pit of stomach, after eating.* Abdomen swollen, hot, very *sore above the navel,* where there is a *great deal of colic,* sometimes better from pressure (Pod.). Disposition to pick or bore the nose. Grinding of the teeth during sleep. Aggravation at night during dentition.

Remarks. Cina is rarely used in dysentery, though many effectual cures have been derived by the medicine. The passage of pieces of small thick mucus with or without blood is an indication. Pinching colic in the navel during stool helps its use.

CINNABARIS. *Bloody dysentery. Greenish mucus with blood. Pinching colic before stool.*

Rectum and Anus. Itching in anus worse at night in bed. Bleeding hæmorrhoids.

Accompaniments. Nausea. Flatulence worse in forenoon. Griping before stool. Rumbling, with pain passing from the umbilical to the pubic region.

Remarks. Cinnabaris or Red Sulphide of Mercury is useful in particular cases of dysentery. As a mild preparation of mercury, its use is recommended in cases where the greenish mucus is not attended with profuse flow. In comparison to Mercurius sol., its use is advisable in cases where there are not too many stools but the stools contain green mucus with small quantity of blood. It is useful in mild muco-fibrinous form or in the sub-acute form of bacillary dysentery.

CICUTA VIROSA. *Stool.* Brown, slimy, frequent with urging and copious urine. Mucous diarrhœa with *irresistible urging to urinate.* Itching in rectum during stool. Frequent, black mucus in small proportion with urging.

Rectum and Anus. Protrusion of the rectum with stool. Sudden urging with bruised pain in small of back and evacuation. Itching in rectum. Pain in rectum after rubbing as if burnt. Hæmorrhoids with sensation as if the orifice is contracted.

Accompaniments. Convulsions from various causes and injuries. Chorea-like, epileptic form, tetanic or perperal convulsions. Convulsions with insensibility and staring eyes. Frequent micturition, *Involuntary micturition* (Cupr.). *Spurting of urine. Spasm of pectoral muscle, sometimes with violent hiccough or with great difficulty in breathing.*

Remarks. Cicuta is a medicine mostly applicable to children, children suffering from dysentery, fever and convulsion should have the benefit of the medicine. In bad cases of dysentery with hiccough and great prostration it can render relief.

CISTUS. *Stool.* Chronic dysentery. Mucus and blood with greyish yellow stool. Irresistible urging before stool.

Rectum and Anus. Urging.

Accompaniments. Sensitive to cold air. Sorethroat with intolerable dryness, worse from cold air, better by swallowing of liquid, great swelling of uvula and tonsils. Nausea. Pain in the stomach after eating. Cold feeling in the stomach before and after eating. Flatulency. *Internal coldness in the abdomen. Aggravation from midnight until noon.*

Remarks. Cistus is rarely applicable to cases of dysentery unless sensitiveness to cold is clearly manifest. Internal coldness of the abdomen is a pointed indication.

COLCHICUM. *Stools. Discharges of white, jelly-like or bloody mucus. Contained many white shreds. Slimy and bloody with tenesmus. Frequent with griping. Offensive containing pieces of white membrane. Frequent offensive, orange-yellow, slimy, with bright yellow flakes without fæces.* Slimy brownish-black, of a turpentine look, putrid, as if mixed with fresh blood. Slimy greenish-black, smelling like fresh blood. Thin, yellow and bloody. Stools preceded and followed by pain, rumbling and motions in abdomen, then ineffectual tenesmus. Pain in abdomen during and after stool. Slimy with tenesmus. *Changeable in character, with great tenesmus.* Reddish mucus like scrapings of intestines. During stool sometimes protrusion of anus. Involuntary. Hot stool. *Black, offensive.* Bloody. Frequent. Offensive, containing lumps like sponges. White, transparent, gelatinous mucus. *Tenesmus: with only a little faeces at first, then transparent, bilious, membranous mucus, with relief of colic. Sanginous evacuations.*

Before stool. Griping colic. Rumbling in the abdomen. Cutting. Ineffectual tenesmus. Colic without the ability to stretch out legs.

During Stool. Pain in abdomen. Great tenesmus. Prolapsus ani.

After stool. Pain in the abdomen. Rumbling. Relief of colic.

Rectum and Anus. Prolapsus. Tenesmus. Urging to stool. Spasm of the sphincter ani during a discharge with shuddering over the back; such spasms occur also without a discharge.

Accompaniments. Appetite for different things, but as soon as he sees them, or still more smells them (Nux v.), *he shudders from nausea and can not eat.* Burning in epigastrium. Distension of abdomen. Griping. Coldness of the stomach (Verat.). Colic relieved by flatulence. Vomiting exhaustion.

Remarks. The dysentery of Colchicum points to the muco-fibrinous variety. The shreds of intestines indicate the sloughs. It is applicable to a severe form of dysentery having intolerable pain from griping and tenesmus and spasm of the sphincter ani from passage of mucus. Slough in hæmorragic dysentery with great exhaustion indicates its use in the first stage. Reddish mucus-like scrapings of the intestines calls for its use. Colchicum can only be used at the beginning of the sloughing dysentery. In the after stage it is generally of no use. There Crotalus or Lachesis can only render help.

(To be continued).

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

For the Month of February, 1908.

Date.	Barometer. (corrected.)	WIND.		TEMPERATURE.		Humidity.	CLOUD.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·912	E	4·4	80·5	64·0	95	*Nil*	No Rain.
2	29·928	S E	4·0	82·0	66·0	100	10	
3	29·905	E	1·8	81·0	67·0	95	8	
4	29·974	E	2·1	73·0	66·0	90	7	
5	30·029	E	2·8	79·8	66·0	77	8	
6	30·112	E	4·2	78·0	62·8	76	7	
7	30·128	N	3·8	78·5	66·0	81	9	
8	30·141	E	4·2	76·0	58·0	54	*Nil*	
9	29·996	N	2·0	75·8	58·2	62	”	
10	29·945	Calm	3·4	76·8	59·5	83	”	
11	29·892	N	2·8	80·8	59·0	69	”	
12	29·886	Calm	1·7	81·0	61·0	86	”	
13	29·910	Calm	1·6	82·5	64·8	95	8	
14	29·887	N	1·9	85·0	64·5	62	*Nil*	
15	29·880	E	3·3	81·0	62·0	47	”	
16	29·954	E	1·7	82·0	63·2	79	”	
17	29·924	W	1·3	82·8	67·0	75	6	
18	29·930	N	1·8	82·0	67·2	67	*Nil*	
19	29·886	S W	1·1	83·0	67·0	90	3	
20	29·852	S	3·2	85·2	70·0	88	*Nil*	
21	29·900	E	2·5	87·8	67·0	66	”	
22	29·912	E N E	2·2	84·8	63·0	41	”	
23	29.924	Calm	1·7	83·0	63·0	75	1	
24	29·923	N	2·0	83·8	65·5	74	*Nil*	
25	29·936	Calm	1·5	85·0	63·0	73	”	
26	29·879	S	2·5	85·8	67·8	86	”	
27	29·878	E	4·5	82·5	71·0	91	4	
28	29·871	S	4·3	89·0	71·5	88	*Nil*	
29	29·829	E	4·2	91·0	68·0	92	”	
Mean	29·935	38N 75°E	2·7	82·1	64·8	78	3	

Remarks: In the month of February, the mean atmospheric pressure was 29·935. During January it had been 30·070.

The direction of the wind was N. E. The velocity of the wind per hour was 2·7 miles against 2·3 that of the last month. The mean maximum temperature was 82·1 and the mean minimum 64·8, making a difference of 17·3 degrees. In the month of January the mean maximum had been 73·7 and the mean minimum 57·4 degrees, shewing a difference of 16·3. The mean humidity was 78 per cent. In the month of January it had been 81. There was no rainfall.

Cholera took away 23 persons in the week ending the 25th January. During the week ending the 1st February the mortality was 24. The *Ardhodaya Jog* took place on the 2nd. For bathing in the river Bhagirathi more than three lakhs of pilgrims came into Calcutta. About half of them located themselves at Kalighat, the sacred shrine of the goddess Kali, four miles south of Calcutta, from the Indian portion of the town. The river adjoining Kalighat is a narrow stream called Tolly's Nullah, which is very shallow and its current is rather stagnant. It serves as the reservoir of cholera, for all the year round sufficient number of cholera germs have been detected in its water. The pilgrims bathed in the narrow stream, got cholera and spread the disease in the city. This was the principal focus.

In the week ending the 1st February mortality from cholera was 24. During the week ending the 8th February, just after the *Ardhodaya Jog,* the mortality suddenly increased to 104. In tke week ending the 15th Eebruary, it was 129. In the week ending the 22nd February, it was 112, and in the week ending the 29th February it was 120.

Deaths from plague came to 16 during the week ending the 25th January. In the week ending the 1st February, the mortality was 15. During the week ending the 8th February, it was 9. In the week ending the 15th February it was 13. In the week ending the 22nd February it was 9. In the week ending the 29th February it was 31.

The mortality from small pox was gradually increasing during the month. The highest was 13 during the week ending the 29th February. It was not less than 8 in the other weeks.

Deaths from fever were almost the same as in the month of January. During the week ending the 1st February the mortality was 129. In the week ending the 8th February it was 114. In the week ending the 15th February it was 128. In the week ending the 22nd February it was 121, and in the week ending the 29th February it went up to 146.

Deaths from bowel complaints ranged from 57 to 73 in a week.

During the five above mentioned weeks, the mortality was 533, 581, 678, 629 and 678, making a total of 3099. The ratio of death per thousand during the period was 37·94. During the month of January it was 40·65.

EDITOR'S NOTES.

Arterio-sclerotic Remedies.

The following occurs in the *North American Journal of Homœopathy* for February :

" Kali iodatum and natrum iodatum, each in the 1 trit., cause a gradual lowering of manometric pressure, the minute dosage not developing local congestions.

Arsenicum iodatum, 2 trit., has been helpful in senile gangrene ; also in cardiac anxiety.

Aurum iodatum, 6x and plumbum iodatum, 6x, act deeply in arterio-sclerotic conditions.

Strontium iodatum, 3 trit., is notable in arterio-sclerosis with aneurysmal complications.

Greater than all of these remedies, however, is baryta muriatica of which a thorough study has been recently published by Dr. Cartier, of Paris."

Suppuration Remedies.

The *North American Journal of Homœopathy* for February has the following :

" The remedies recommended in the treatment of suppuration are with few exceptions still those given by Bœnninghausen and Jahr many years ago, showing how immutable is our law of cure : For laudable pus, which is whitish or yellowish, inodorous and secreted by healthy granulating surfaces, the chief remedies are Puls., Hepar., Merc., Calc. c., Silica and Sulph. ; thick yellow bland, Puls. For ichorous, thin, acrid pus, Arsen., Asafet., Slica, Merc., Carbo. veg. Phosph, Psorin, Coni., Phytol, (Nat. mur.). For sanious pus, bloody, often ichorous and fetid, Asafet, Hepar., Merc., Moni., Arsen, Carbo. veg., Nit. acid, Phosph, Silica, Puls., Staphy., Tellur. For serous, watery pus, Merc., Staph., Caust., Asafet., Arsen., Silica., Sulph. For viscid pus., Coni., Asafet, Merc., Phosph., Sepia., Bovis, and Viola.

For malignant pus, Asafet., Silica, Merc., Phosph., China, Arsen., Kreosot., Sulph., fetid, cadaverous, Graph. ; greenish, malignant. Kreosot. : fetid ichorous, Phytol. ; out of spongy edges, Silica ; with fungous growth, Thuja. ; with sloughing, Crotalus ; with livid aureola, Laches., Carbo. veg , Asafet. ; with blackish base, Coni. ; with scurvy, Carbo. veg. ; of greenish color and offensive character, Asafet. ; with much burning, Arsenic. Sufur ; stringing, Apis, Silica ; curdy, mixed with cheesy flakes, Bellad, Hepar. ; with hectic fever, Phosph., China, Arsenic.

Profuse, Puls , Merc., Asafet., Phosph., Hepar., Sulfur ; bland Puls. ; acrid, Merc. ; with putrid smell, China ; in bone trouble, Fluoric acid. ; after compound fractures, Arnica ; with fistulous opening, Phosph, Pytol.

Scanty, Calc. c., Hepar., Merc., Laches, Silica., Arsenic, Bellad., Crotal. ; long lasting, Silica., Laches ; tardy and dark in color, Crtoal."

Epidemic Dropsy at Alipur.

The *Indian Daily News* of the 14th February writes as follows :

"From the report of Lieutenant F. H. Daley, I.M.S , M.D., on the 50 cases of Beri-Bori in the Alipur Reformatory School we find the admissions to the hospital were between 5th September and 8th November, the largest number of admissions on a single day, being 8 on the 26th September last. Of the 50 cases only two proved fatal. The hospital being limited to 10 beds, the upper story of a workshop was taken over as a special hospital. The cases admitted during the month of September were more or less severe, but those occurring in October and thereafter were of a milder type. The report, however, appears to be more or less of a negative character so far as the tracing of the origin of the disease is concerned. Dr. Daley says Burma rice was issued from the beginning of April 1907, up to which time the ordinary country rice of good quality was used, and that at the beginning of the oubreak a suspicion arose as to the Burma rice being the cause. He further goes on to state 'it is noteworthy that none of those fed on country rice, including the Eurasian lads and those in hospital took the disease,' yet he nowhere definitely lays, it down that Burma rice has occasioned the outbreak. On the contrary he concludes the report by saying 'it is very noteworthy that in the Alipore Central Jail, which is separated from the Reformatory School by about 150 yards and whose daily population is about 2,000 there is not a single case though Burma rice was exculsively used in the Jail.' He appears to be satisfied with the water supply for drinking, culinary and bathing purposes, and with the exception of the ventilation of the sleeping barracks, in all other respects, in the opinion of the doctor, "the school is in a most sanitary state.' Dr Daley thinks that Beri Beri probably remains dormant for an indefinite period before manifesting itself and on this basis he theorizes that the disease was imported by a Magh from the Chittagong Hill Tracts who was five months in the School before the epidemic broke out."

Dr. Daley still adheres to the name Beri-beri, without differentiating it from Epidemic Dorpsy. We think the cases are Epidemic Anæmia or Epidemic Dropsy and not Beri-beri.

Division of white blood cells outside the body.

The following appears in the *New York State Journal of Medicine* for January 1908:

"A profitable and interesting study of the action of white cells of human blood, outside of the body, is reported by Deejen, of Berlin, who observed division of the leucocytes and movements of the lymphocytes. In order to study these processes special precautions were necessary. The finger from which the blood was drawn was first carefully cleansed with hot water and pumice stone, and then dried with a clean cloth. A slide of quartz, or Jena glass, or still better of rock crystal, was essential, as the processess do not take place on a slide of common glass. The blood was spread out in the thinnest possible layer between the slide and cover glass and maintained at body temperature. In about ten minutes division of the polynuclear leucocytes into mother and daughter cells, each with a portion of the nucleus, was observed. The daughter cells remained motile for several hours and then showed granular degeneration. Occasionally there was a budding and casting off of the smallest particles, which resembled the blood platelets. These small particles remained motile for serveral hours, while the true blood platelets perished, even as quickly on quartz as on glass. Below body temperature there was no division of the leucocytes.

The lymphocytes showed no cleavage processes, but moved vigorously. In glass the movement was not observed so soon, but took place after several hours, or even on the second day."

It is interesting to observe the division of the white cells outside the human body. The lymphocytes were not inclined to divide. This experience does not coincide with the behaviour of the lymphocytes as it happens within the blood vessels of the human system. There the lymphocytes change and divide

High Dilutions.

The following interesting note is from the *North Amerian Journal of Homœopathy* for February :

"The infinitesimal dose has been the subject of much discussion. We should like to cite the opinions of two masters of indisputable authority and fully appreciative of the "infinitesimal." In France it has been Mure, frequently quoted in Clarke's Dictionary, who has magisterially considered the high dilutions. In his "Homœopathic Pure" there is a chapter which should be read in its entirety. He says :

"There is no doubt that the thousandths or the ten-thousandths are perfectly active, but the chances of alteration become so great when we multiply the dilutions that we have less confidence in a thousandth than in a hundredth.

"Each morbid condition has a dilution of preference or election the further you go from this dilution, higher or lower the more danger there is of an aggravation.

"Dynamisations are like keys—each powerful in its corresponding lock. The large key is as useless for the small lock as the small key is for the large lock."

Ludovic de Parseval, one of the best disciples of Hahnemann, practising in Marseilles in the first half of the nineteenth century, and whose cures were astonishing, published a list of drugs, with potencies used by him, which we commend to partisans of the low dilutions :

Aconitum ..	400	Graphites ...	... 2,000
Agaricus ..	... 300	Ipecac ...	... 400
Agnus castus	... 200	Kali carbonic	... 1,600
Alumina ..	... 800	Lachesis ...	... 800
Anacardium	... 100	Laurocerasus	... 1,000
Antimonium crudum	... 1,600	Ledum ..	... 1,000
Argentum ...	... 1,600	Lycopodium	... 400
Arnica ..	... 400	Magnesia carb.	... 1,600
Arsenicum ...	... 4,000	Natrum muriat.	... 2,000
Asafoetida ...	... 1,600	Nitric acid ...	... 1,600
Baryta carbonica	... 2,000	Nux vom. ...	... 400
Belladonna ...	. 400	Phosph. acid	... 1,600
Borax ...	100	Phosphorus	... 800
Bryonia ...	. 100	Platina ...	... 1,600
Calc. carbonica	. 400	Plumbum ...	... 1,600

Cannabis	100	Pulsatilla	400
Cantharis	1,500	Rheum	1,000
Carbo animalis	300	Rhododendron	1,600
Carbo vegetabilis	400	Rhus tox	1,000
Causticum	2,000	Spigelia	1,600
Chamomilla	2,500	Stannum	1,600
China	400	Staphysagria	1,000
Cicuta	300	Stramonium	1,000
Cina	200	Sulphur	800
Clematis	1,600	Tartarus emet.	1,000
Coffea	2,000	Zincum	1,600

Parseval adds: "It is important to procure the dilutions above indicated, the doses being fixed according to the energies of these remedies as recognized by an experience of number of years. None are recommended whose efficiency I have not personally tested."

These facts are indeed good readings. We are not told how the dilutions were prepared. If each shake of the bottle make the preparation a potency higher, then there will be no end of potencies but no dilutions. We should look to the scientific side of the preparation of dilution without bothering our heads about potencies.

The Qualities of Brain Matter.

The *Medical Times* for February has the following:

"The general belief has up to present time, we believe, obtained that the excellence of the psychic machinery depends not upon the size of the brain, but upon the number and extent of its convolutions, especially in the cortex. But Dr. Spitzka, in his treatise on human brains, just issued by the American Philosophical Society in Philadelphia, bids us modify this belief very decidedly. He declares that it is the white matter of the corpus callosum which unites the cerebral hemispheres, and the fibres of which radiate so extensively, that determines the quality, the fineness and the usefulness of the brain. The last of these distinctions no one will doubt; for if the fibres of the callosum are degenerate, cerebral disease will be manifested whether or not the cortical cells be normal. Dr. Spitzka declares that idiocy and mental insufficiency have their seat in the disease, traumatism or imperfect development of the corpus callosum. He finds the brains of totally unskilled men to be lightest; those of mechanics, clerks, business men and teachers are slightly heavier. The greatest brain weights are among "the geniuses of the pencil, brush and sculptors's chisel, the mathematicians, scholars and statesmen." It seems that the configuration of the brain is determined according to the work it does, special types being produced in abstract thinkers, experimenters and artists. The civilized peoples have a slight increase in brain bulk over savage races ; but this does not nearly account for the mental disparities. These are better explained in Dr. Spitzka's researches which show differences in structure and adaptation of parts."

So many theories are coming before us as to the importance of the portions of the brain, that to accept any one of the theories will be premature. However, one fact comes to the forefront. It is the intrinsic development of parts of the brain, which is due to particular occupation.

CLINICAL RECORD.

Indian.

CASES BY DR. H. C. RAY CHAUDHURI.

1. *Rheumatism cured by Spigelia.*

R———— aged 5, residing at Sankaritola East Lane, had fever and rheumatism for the last three days. His father being a medical practitioner gave *Aco.* 3 dec. I saw him on the 26th November, 1907 at about 9 A. M. His temperature was at that time 101·6 F. Bell 30 gls. were prescribed. Evening temp. 103 F.

27th. Finding him worse and almost all his joints being affected, I thought of changing the medicine. Temperature in the morning 102 F. Finding no positive indication, *Colch.* 3 dec. gls. were prescribed. Evening tem. 103° F. The only noticeable feature was the increase of the heart-beats. Pulse was 130 per minute. The unequal ratio between the temperature and the pulse was marked from the commencement of the disease.

28th. His condition was almost the same. Temperature in the morning 102 F. Pulse was the same as before. *Spig* 3 dec. was prescribed. The character of the fever was that it used to increase gradually from the morning and was at its height in the evening. The amelioration would come at the last part of the night. Evening temperature 103°.

29th. In the morning the temperature came down to 101·6 F. and the pulse became 120. *Spig* 3 dec. was continued. Evening temperature 102 F. The rheumatic affection was getting less.

30th. Temperature in the morning 100 F. Pulse 110. *Spig* 3 dec. was continued. The joints of the upper extremity were relieved. The same medicine was continued for a week and he became well as before.

Remarks. Spigelia was suggested for the immediate increase of the pulse rate in comparison with the rise of temperature. The morning fever was another indication. In fact, I did not expect that the acute rheumatism with the high temperature could be subsided by Spigelia within so short a time.

2. *Jaundice cured by China.*

K———— aged 20, living in Serpentine Lane was attacked with jaundice for a fortnight. He was getting whitish stools. The jaundice was deep yellow in the eyes and skin. Burning of hands and feet with itchiness of the body was present. On pressure, pain in the liver was felt. He had no fever. He came to me on the 1st November, 1907, for treatment. *Bryo.* 6 dec. was prescribed.

4th Nov. No change in the jaundice. The stool was whitish as before. *China* 3 dec.

6th Nov. The jaundice of the skin less. Whitish stools were still evacuated. *China* 3 dec.

9th Nov. He was improving. China made him costive and he had no stools for two days. *Bryo.* 6 dec.

12th Nov. He passed healthy yellow stools. The jaundice was becoming less. *China* 3 dec.

15th Nov. He was much better than before. The same medicine was continued.

23rd Nov. He was almost without jaundice, and passing yellow healthy stools. China was continued for a week more. He subsequently came and reported that he was without the disease. The vestige of jauudice has disappeared.

Remarks. The case illustrates the power of *China* on jaundice with the presence of white stools. Many cases of the disease has been cured by the medicine.

3. *Herpes cured by Mercurius sol.*

On the 23rd September, 1907, I saw a lady, aged about 40, living in Suri Lane, suffering from herpes of the left side. She had the disease about a fortnight. At first she was advised to apply an ointment but that did not relieve her the least. Then she took Rhus tox., Aco. and Bell. with the same result. I saw the eruptions covering the left arm and forearm, extending over the left half of the body and ran as far as the thighs. They were most intense on the forearm, the trunk and the abdomen. Intense burning and tensive throbbing were present. On lowering the forearm, the suffering immensely increased. She stated that the disease appeared with the swelling of the lymphatics. *Merc. sol.* 12 dec. was prescribed. Boric acid with butter in the proportion of one to eight was advised as external application.

24th September. It was reported that she was slightly better last night, as her pains increased the most at night. Merc. sol. 12 dec. was continued.

26th. The cure was visible commencing from the upper arm. There the eruptions seemed to have lost force and changed in colour. Their appearance was rather blackish. Ease and comfort were manifest in her actions. *Merc. Sol. was continued.*

30th September. She was gradually improving. The forearm almost dried and was without any fresh issue. *Merc. Sol. contd.*

5th October. The trunk as well as the abdomen was participating in the favourable termination. *Merc. Sol. contd.*

The medicine and the external application were continued for a week. It was reported that she has got rid of the disease.

Remarks. Merc. Sol. was selected for the failure of Rhus tox., also for the precursory attack of lymphatitis, and nightly aggravation. Merc. Sol. is generally not used in erysipelas or herpes. My experience confirms the view that the medicine produces good result in those diseases. It has given ample benefit in small-pox and other kinds of pustular eruptions.

4. *Ulcer cured by Boric Acid.*

A maid servant aged about 35, living in Nebutola Lane came to me for treatment, for a large ulcer nearly double of a rupee on the left shoulder, from which she was suffering for about two years. She said that she had applied Carbolic acid, Boric acid, and various ointments without cure. She came to me on the 12th March, 1907. Seeing the indolent character of the ulcer with a few sloughs, I prescribed *Boric Acid* 12 dec. to be taken internally and Boric Acid with butter in the proportion of one to eight for external application.

15th March. The condition of the ulcer was far better than before. The same medicine.

21st March. The ulcer was reducing in size. The same medicine.

26th March. She was progressing favourably. The same medicine was continued for about ten days. The ulcer was healed up and cured.

Remarks. Boric acid is generally administered by me in cases of indolent or phagedænic ulcer. In fresh cases of ulcer, it is not efficacious, and rather produces bleeding by slight touch.

5. *Carbuncle cured by Boric acid and Silicea.*

A young woman of about twenty-five living in Sankaritola East Lane had a carbuncle bigger than a large orange on the upper part of the back, over the dorsal spine. She was getting fever every day. As temperature was not taken, the height of the fever could not be ascertained. There was burning. The honey-comb appearance was the characteristic sign. I saw her on the 28th February, 1907. *Hepar Sulph.*, 12 dec. was prescribed.

2nd March. The fever increased after the administration of Hepar Sulph. Otherwise she was in the same state. *Bell.* 6 dec.

5th March. She was rather better of the fever. It was observed that the middle portion of the carbuncle had broken out and made a hole. *Bell.* 6 dec.

6th March. That day from the morning there was a sudden rise of the temperature. Thermometer showed 104 F. *Bell.* 30, every 3 hours.

7th March. The fever was gradually subsiding. The condition of the carbuncle was almost the same, though it had extended. *Bell.* 30.

8th March. She was better. The fever had left her. *Bell.* 30.

13th March. There was no more fever. *Sil.* 12 dec. was prescribed. She was advised to cover the carbuncle with the ointment of butter and boric acid in the proportion of eight to one.

16th March. She was doing better than before.

There was no more fever. *Sil.* 12 dec.

17th March. The carbuncle was seen to be choked with slough. *Boric acid* 12. dec.

29th March. The state of the ulcer seemed to be better. Many pieces of slough had come out. *Boric acid* 12 dec.

3rd. April. The ulcer was healing up and sloughs were not visible. *Silicea* 12 dec.

Silicea and clarified butter were applied for a fort-night ending in perfect cure.

Remarks. Boric acid was tried to get rid of the sloughs and there was no bleeding. As soon as the necessary step was over, our old friend *Silicea* was welcomed to make the final cure. It will be seen that the internal administration of Boric acid has a place in almost all sloughing sores and ulcers, including carbuncle, etc.

Foreign.

LONDON HOMŒOPATHIC HOSPITAL.

Reported by Dr. F. Roberson Day.

Tabes Mesenterica.—Muriel F., aged 3½, was born in South Africa, and had been bottle-fed. For two years and three months she had suffered from capricious appetite, vomiting, and diarrhœa. The abdomen was large and the motions were offensive in odour, averaging four to six a day. The vomiting had been a persistent symptom since ten months old.

She first came to me on September 13, 1906, presenting a very wasted appearance. The skin was flabby, anæmic, and had a transparent appearance about the face—especially the nose and eyelids. The abdomen was much distended. *Ars. I.* 3, gr. ii. *t.i.d.*, and *tuberc.* 30 weekly doses were prescribed.

September 28.—For eight or ten days there had been no vomiting, and motions were better.

October 25.—Had only vomited once during last month, and motions were less offensive.

January 11, 1907.—Better in every way. Repeat. Continues very anæmic.

June 27.—No vomiting now, and motions are more natural, and bowels act twice a day. She is less flabby and generally improving. *China*, 3x, *ter in die*

October 17.—Still anæmic, but very seldom vomits. *Fer. phos.* 6, miii., four hours.

Prompt Cure of Diarrhœa in a Rickety Child.—Ivy S., aged 2, came on July 2, 1907, with diarrhœa, the bowels acting every time she took food. The motions were blood-stained and slimy.

This was a clear indication for *merc. cor.*, which was given in the 3 potency, pil. ii., two hours, and the diarrhœa completely stopped the next day, when the constitutional medicine, *calc. phos.* 12, was resumed.

Plumbum in Albuminuria.—Reginald C., aged 2 years and 5 months, came June 13, 1907. He presented the appearance of general anasarca, and was specially puffy about the face. The urine was abundant and contained albumen. He had not had scarlatina. His mother said the puffiness was chiefly about the eyes in the morning. He was inclined to diarrhœa. *Plumb.* 12 *pil.* ii. *ter in die.*

June 27.—No albumen on boiling or with nitric acid.

July 11.—No albumen, and face much less puffy. His mother says he has got thinner, *i.e.*, the œdema had disappeared, He was kept under observaion till October 7, and the urine regularly examined. The albumen never re-appeared and the only medicine given was *plumb* 12.—The *British Homœopathic Review*—February, 1908.

FROM MY PRACTICE.

BY THE LATE DR. GOULLON, WEIMAR.

CASE OF DYSPEPSIA.

On the second of October last a man in his sixty-second year wrote to me: "Since the remedies I have used for the last nine months to cure an ailment of the bowels have so far proved of no avail, I feel myself called upon to seek for the aid of a physician and to request you to call on me." The patient has been suffering from constipation for years. Just now he has a sufficient stool, owing to his eating largely fruit and from lavements of water; nevertheless after each evacuation there remains behind a very disagreeable sensation as if there was a further constipation further up in the instestinal canal. At the same time there is an excessive flatulence, showing itself at various times during the day. After severe urging there are found discharges of mucus from the rectum. Urination takes place only slowly and very sparingly, but it is copious after the stool. There is also nearly always a sensation of distension and of coldness in the region of the pelvis and the anus.

On the fourth of October, when I called on him, he had still been able to be out. He told me his troubles in detail and laid especial stress on a permanent sensation of pressure in the perinæum. The abdomen is distended and tense, and the examination somewhat difficult owing to a certain corpulence. I thought the best introduction to the treatment would consist in the alternation of *Sulphur* and *Lycopodium.* So the patient received for the first evening a dose (four drops) of *Sulphur* 12, and for the next evening *Lycopodium* 12 (same dose).

To my surprise I was called in again on October 5th and found a quite different image of disease. I found out that he had taken cold by staying too long in the evening in an arbor after a previous rain. Thus there was no idea of its having been the effect of the medicine. The patient is very much excited and flurried, was unable to sleep the night previous, has much fever, the heart-beat is intermittent with great frequency of the pulse; there are severe rheumatic pains, and a great accumulation of gases in the abdomen which is violently distended. There is *retention of urine,* also a tendency to perspiration. I could not agree that it was an attack of influenza. The respiratory symptoms did not sufficiently point in that direction. The tongue was pretty dry and coated.

I was uneasy at the *intermittent heart-beat* and the *retention of urine,* in view of the other pathological phenomena. The specter of uræmia and its fatal consequences rose up. In such moments the medical counselor would like to have another councilor by his side. For woe be unto him, especially if he be a homœopath, and it should appear later on that a surgical operation ought to have been undertaken. But I found after all, though the abdomen was violently distended by meteorism, that the bladder, so far as I could tell from examination, was not surcharged. I, therefore, gave as the first remedy *Nux vomica,* which I had with me; because this has the symptom of the discharge drop by drop of the urine (especially with older people), while there is strangury; besides also for the general condition. But I also sent him at once *Aconite,* directing him to use these remedies in alternation. In this remedy we really have the particular point of this case. *Aconite* in such cases, acute even where they offer, as here, quite a threatening appearance, and a dubious prognosis is a true panacea. It levels and disposes everything in the organism in a most harmonious manner and directs it gently than any other remedy into the crisis which brings on the cure. When I made my call in the evening, a practiced eye could already see a slight change for the better, but his intense pains caused the patient to ask for an injection of *Morphine.* As he had never before been treated homœopathically, I found this natural enough; but he had to put up with the fact that I was not apt to give such injections. Also his sister asked, as I was leaving, whether I would not give him something so that he could sleep. She no doubt thought of that vicious *Morphine.* And why vicious? Because with the simple use of *Aconite* and *Nux* we secured a night with a good deal of benefit and natural sleep with an alleviation of the pains. Also urine made its appearance in spite of the fact that there was a copious perspiration. This latter was most beneficent and as is well known, it is often brought on by *Aconite.* The tongue was still somewhat dry, but on the following day it became almost mormal. *Homœopathic Envoy,* January, 1908.

CASES OF CANCER CURED BY HOMŒOPATHIC MEDICINES. THE SYMPTOMS GUIDE TO THE PROPER REMEDY.

D. C. M'Laren's Cases.

1. *Conium.* A stout Irish woman, forty years old, was condemned to operation, with the entire left breast hard, almost stony, nipple inverted. Under *Conium mac.,* in one month, the breast was entirely soft and natural as the other.

2. *Sulphur.* A woman, whose sister died of cancer two years before, presented a breast with a lump size of a goose egg. Under *Sulphur* a cure resulted in six weeks.

3. *Conium.* An Irish woman, with a large tumor of recent and rapid growth in left breast and nipple inverted, received *Conium*

mac. In one month the breast was in a normal condition, without a trace of hard lump.

DR. QUACKENBUSH'S CASE.

4. *Sepia.* A woman of thirty-seven years, suffering with Bright's disease had a tumor in left breast five inches in diameter. Under *Sepia* she was cured in three months and remained well.

C. M. BOGER'S CASES.

5. *Nitric acid.* A woman had the left breast and all axillary glands of that side removed. Soon a lump appeared in the right breast. While under treatment with *Nitric acid* (in potency) the tumor disappeared, and her excellent health enabled her to do more work than in years before.

6. *Calc. fluor.* In a young Irish girl, mammary glands, axillary glands, and those between mammæ and axilla were all affected. Under *Calc. fluor.* the indurations had almost entirely disappeared at time of report.

7. *Conium.* A married woman of thirty-three years had a nodule, size of a walnut, in left mammary gland, for twelve years. It seemed deep and attached to the ribs. She reported it painful for two weeks. *Bell.* relieved the pain, but under *Conium mac.* the lump grew steadily smaller till cured.

E. E. CASE'S CASE.

8. *Conium.* A retired school teacher of sixty-one years had a bunch, size of a hickory nut, in left mammæ for three months. In two months, under *Conium mac.*, the bunch entirely gone.—*Homœopathic Envoy*, January 1908.

Gleanings from Contemporary Literature.

NEURASTHENIA OR NERVOUS EXHAUSTION.

By John D. Ponnar, M.D.,

BUFFALO, N. Y.

In approaching the discussion of the subject, we are confronted with its unlimited area of operation and its wide diversity of causes. On the other hand, its ways of manifesting its existence in individual cases are about equally limitless—depending, as they do, upon age, location, idiosyncracy, and co-existing diseases, or disturbances of the normal functions. Such character at once distinguishes the ailment, while rendering the complete diagnosis rather indefinite; therefore, with our present knowledge of the subject, it becomes us to deal cautiously in making our views known to the patient, while carefully weighing all the co-related features and, by processes of elimination and deduction, arrive at a decision.

It is a well-accepted principle of practice, that, where many remedies are prescribed for any disease, its true nature or its special remedy remains unknown. Likewise where vast and widely differing causes appear to produce the same general result, there is yet an obscurity as to the real pathology. Such we regret to admit is the case in neurasthenia. Nevertheless its known existence as a member of the morbid affections which afflict man, gives it classification amongst the more usual diseases.

That it is a "condtion" rather than a specific entity I feel justified in believing; yet, with our limited proof, we must await later investigation to verify such view.

In this day of germ theory of disease, we have grown rather skeptical about pathological states, except in so far as may reasonably be produced by the destructive germ influence. The time has gone by when we can loosely ascribe to chill or atmospheric states, or even heredity, the role of honor as accusative forces in precipitating a sickness. We now look for some culprit, in the form of bacillus or germ. When we have isolated the venal force, we thereupon proceed to seek its antitoxin. Thus the materialistic has supplanted the more or less ill-defined influences which held the stage in the older school. But influences are yet such vital forces, we must carefully weigh them and often decide whether such are not even now worthy of being ascribed the prior place in producing morbid states that predispose to the growth of the germ. While thus casually delineating some of the preconceptions which arise out of the study of this quite prevalent sickness, I shall now place before your attention the picture of Neurasthenia or Nervous Prostration, as commonly met in our practice.

Weakness, not attributable to any well-known cause, is the most salient symptom. The history of each case, however, will usually reveal the existence of some excess, psychic or physical, thence we are guided, in eliciting the history in the individual case, following, from cause to effect, each line of morbid force that is revealed, till the full array of facts are in mental revision, then relation as primary, secondary or later-morbid factors. Thus the sum of abnormal discords are voiced by this vital instrument of human instincts, emotions and ambitions. Small wonder if our point of view changes quickly when mind and body , as causative forces, alternately take the lead.

The patient is irritable and easily excited, but soon exhausted, leaving a feeling of apathy. He suffers from exhaustions, fear and inability to make decisons. Inconstancy is also a marked feature, but intellectual capacity is not materially lessened, yet patient forgets easily.

Spontaneous mental acts are lessened, visual memory-pictures lessened, power to think lessened, yet subject to habit of introspection to a morbid degree.

Subjective symptoms are headache, vertigo, sleeplessness, fear of sickness, nosophobia, often combined with hypochondria.

Some of the single symptoms are also combined with this same despondency. Lead-cap headache is a special feature, while insomnia is often so persistent as to dominate the clinical picture. Pavor nocturnus is often a troublesome feature, particularly with children, who suffer with frightful nightmares. Nyctalgias are often of such distressing nature that patients are nightly tormented with dreadful pains in the epigastrium. In other instances the pain is felt beneath the sternum. Special senses also manifest the existence of some abnormal influence.

Such is due to its effect upon the motor nerve supply, rather than the nerve of special sense, for, while sight and hearing are not weakened, there is a distinct debility manifested in the muscles of the eye, supplied by the third pair of cranial nerves, which give motor power thereto.

Athenopia is a condition of neurasthenia brought about by eye strains, as from hyperopia or astigmatism, or muscle unbalance. Again we find, when the patient attempts to stand, with the eyes closed, a tremor of the eyelids occurs—fibrillary tremor of the orbicularis palpebrarum. Orbicularis oris tremor is also noticed.

Motor disorders manifest themselves in weakness, tremor and slight fatigue, but never increase to paralysis, are always general and not confined to one nerve area, never combined with atrophy, nor with alterations in the electric excitability. While tremor is a frequent symptom, it is of the rapid vibratory nature and of small amplitude.

Slight degrees are also found in healthy persons after smoking, venery or drinking, and also from psychic excitement. Deep reflexes are generally increased, especially of the knee reflexes. Foot clonus is occasionally observed, also increase in the mechanical and nerve excitability.

Whenever the knee reflexes are wholly absent, organic nervous disease is liable to be present. Stuttering and mutism, particularly during school hours, are found among children suffering from overstudy, or lack of proper rest and sleep. Fear is also a strong factor in such cases, and Hippus is also not a rare symptom with children.

Neuralgia, while not often found, sometimes occurs as an hemicrania, in neurasthenic patients. Parasthesias, formications and a feeling of coldness, more usually of the feet, but also of the hands, or in the region of the quadriceps extensor femoris muscle, are symptoms—the latter occurring from some sudden shock or fear. Pruritis ani or vulvæ are quite common occurrences—heredity, in this respect, was markedly shown in a cited lineage of mother and three daughters, all having the same pruritis ani et vulvæ at age of thirty years—possibly only co-incidental, yet of sufficient interest to be related by Mayer on "Diseases of Nervous System," as given by Oppenheim. Another sister had a general alopecia—a neurasthenic sequence. Urticaria of a neurasthenic type is found.

Vasomotor disturbances, as erythrobia—morbid flushing—may be very stubborn. A neurasthenic form of intermittent limping is seen. Heart disturbances are closely allied to these vasomotor influences, arising from this disease.

Paresthesias, resembling angina pectoris, occur. Psychic excitement, or coffee or diet may readily increase the pulse, out of proportion with their normal effect.

Tachycardia, as though the heart would stop, I have seen in some well-marked cases of this sickness. Impotence, in male patients, occurs relatively often, which gives rise to our careful enquiry into personal habits—genital and convivial. While bladder disturbances are seldom, seminal losses are quite liable, where debility becomes marked.

Digestive disorders are also frequent—particularly hyperacidity of gastric juice and occasionally severe pain.

Constipation is frequent—may be in the nature of a cause.

Nervous hepatic colic occurs in some (Furbringer), but its diagnosis, as being due to neurasthenia, would depend largely upon the absence of icterus, swelling of the liver and absence of other neurasthenic symptoms, yet the chronic cases of these liver ailments may cause, in part at least, the neurasthenic state. Salivation and also an abnormal dryness of the mouth, are experienced. Albuminuria is also found as sequence to psychic excitement, also oxaluria, while general nutrition need not suffer in the slightest.

Increased tendon reflexis, increased excitability of sensory and, to a lesser degree, also of motor nerves are present, while the cardiac nervous system evinces, in many cases, abnormal excitability. We are thus led to yield to Bouveret's contention, that this is a disease of the nervous system.

This contention is strengthened somewhat by the fact that in chronic intoxication, allied in this characteristics, to neurasthenia, Nissel's method has shown minute alterations in the ganglionic cells, but in this neurasthenic disease the alterations are so minute, our present methods cannot detect them. The anatomic basis being in doubt, we can not properly speak of neurasthenia as being a material disease of the nervous system. It tends to take a chronic course, increasing gradatum. A certain periodicity is also found.

Having thus briefly outlined the symptomatology, let us now observe the states, conditions or influences, which act as causes. Its common occurrences to-day suggest its origin in the "strenuous" life of our people and thus afford an insight into essential nature. For this let us be thankful. As already noted, neurasthenia is a disease of very common occurrence. Both sexes are afflicted, but, in its pure type, it is more frequently found in men than women—the latter suffering more frequently from hysteria.

Such authors as Osler, of Oxford, and Charcot and his pupil, Ellis, all corroborate the view that between these two diseases—neurasthenia and hysteria—there is a close relationship. In fact they go so far as to regard the hysteria in the nature of a resultant to that debility brought about by the morbid train of ills, developed in what is denominated nervous prostration or neurasthenia.

Dr. Austin Flint gives as causes of hysteria, "sudden disappointment, mental anxiety, prostration, violent anger," and, as causes of neurasthenia, "long continued anxiety, or inquietude, increased by other causes, which tend to diminish the vigor of the body, with respect to the hours of sleep and rest." This, you will observe, is a most striking similarity in the symptoms of the two disease.

Charcot gives, as the direct cause of hysteria, causes that act by causing derangement, particularly of nutrition, of the nervous system. That loss of insensibility, in hysteria, shows evidence of nerve exhaustion, in the centers of nerve sensation, are theories advocated by such noted authors as Solier and Ferra. While Gilles de la Tourette believes that hysteria is largely due to desire for simple affection. With the latter exception, we must admit the peculiar and striking similarity of these affections and some sameness in their pathology.

In fact, the contention of Charcot is that hysteria is due to a derangement of the general nutrition of the nervous system. This is also admitted to be the most marked condition in neurasthenia, hence their differentiation, to say the least, becomes complicated by such weight of authority.

Having thus cursorily shown the relationship of the causes in neurasthenia and hysteria, in major features, I will not weary you with further comparisons, but recite still a few more of the marked sources from which this prostration of energy springs. Middle life is the most fruitful period; hereditary predisposition has marked effect where exciting causes supervene. Neuropathic predisposition is likewise a favoring forerunner; congenital weakness of system, particularly of the nerves. Psychic and physical degenerative stigmata are associate causes. Toxicological taint, as from alcoholism of parents, may lay the foundation; emotional nature is also an important etiological factor.

Prolonged psychic excitement, mental over-work, night working and over-heated rooms, also all moments that weaken the organism, loss of blood, and fevers are potent causes of this complaint. Toxines, while a factor, are not a frequent cause. Debility of genital powers and defective hearing or loss of smell provoke the onset.

Those afflicted with persistent scoliosis are frequent subjects. It may be of toxic origin, as from chronic alcoholism, nicotine lead or arsenic. Syphilis is also a fruitful cause. Autotoxic source is not well established, yet finds a supporter in Bouchard. Sexual disorders, especially abuse and Onanism, or interrupted conjugal life, lay the foundation in many cases. Cephalic injuries and shocks, particularly when combined with psychic excitement, as in railway accidents, are a fruitful cause.

Diagnosis.—Neurasthenia must always be diagnosed by exclusion. First satisfy yourself that no organic trouble exists. Phthisis, diabetes, a hidden carcinoma, or uric acid diathesis may induce symptoms resembling neurasthenia, and must be carefully sought, and, if not found, eliminated.

Hypertrophy and heart murmurs are never of the functional character, so, if existing in case of weakness, the nature of such weakness must be sought out in other causes than neurasthenia.

Acceleration of pulse in neurasthenia is more of an emotional source, and is due to vasomotor disturbances. In organic heart affections, such as stenosis, respiration is of dispnœic character and retarded, not quickened, as in neurasthenia. While organic heart disease may itself cause neurasthenia, we must, however, take the general symptoms into account in forming our diagnosis. We should carefully consider the points of resemblance in neurasthenia and such diseases as dementia paralytica, disseminated sclerosis and cerebral tumor, but the differentiation will be shown in the history and lack of mechanical and electrical excitation.

Melancholia, paranoia and nervous conditions, due to some exhaustion, not of a general nature, are readily eliminated from the field of doubt. This, however, is not so in some border-line cases of hypochondriasis and some of hysteria, which either complicate the neurasthenia or are, *per se*, the sickness.

In neurasthenia there are no spasms, while paralyses of the special senses, as are found in hysteria and in both diseases, are seen occasionally in the same subject. I found both, of singular intensity, in a lady patient recently. She suffered extreme prostration from conjugal abuses and emotional shocks, till, wholly wrecked, she fell into an hysterical and neurasthenic state—only dispelled by the removal of the cause.

The prognosis depends largely upon the cause—that from emotional, excessive mental or excessive physical work being the best.

The treatment must depend in each case upon the nature and severity, hence there are no hard and fast rules by wihch we can prescribe for the sickness.

Rest, in cases of great debility, may be imperatively needed, while in incipient cases, quite active physical exercise would be equally good :

hence we must determine the special as well as the more general phases of each case. Some patients will show signs of anemia and for such iron, manganese and beef are indicated, while nerve depression suggests nux, and cold extremities, arsenic, iron and general tonics, together with properly regulated exercise.

In all such food as will be readily assimilated without any likelihood of leaving much residuum to cause fermentation, is indicated. Establish confidence of patient in his recovery, treat any special diseases which are manifested, such as hepatic torpor, lythemic condition, syphilitic taint, all wastes of whatever nature found in patient, then take up the general treatment of the case.

Too much treatment is liable to create in the mind of your patient an impression of the great seriousness of the sickness, hence, while keeping careful watch of every condition, such should not be made the subject of comment to the patient. A rational way of leaving and removal of all special cases as far as possible, and avoidance of their repetition, will, in absence of any organic disease, afford most hopeful prospect of permanent cure.

Observations and Inference.—In the pure type of this disease, we find the nervous system is its particular seat of action ; manifestations of special derangement of the organs, being usually traceable to the nerve action thereon. This occasions enquiry as to the way this is brought about. The cerebro-spinal and sympathetic (organic or vegetative) systems of nerves, while differing in their functions, are, however, intimately related in the workings of the animal economy. While the cerebro-spinal, by its dual nature of motor and sensory power, presides over the special senses and the motion and feeling of our bodies, they also send fibres to join with the sympathetic [system which forms a double chain of ganglia connected by nerve trunks into one complete circuit within the great cavities of the body.

In normal condition, the functions of our body are automatically performed. This sympathetic system, through its ganglia and its terminal nerves of distribution on the surface and in the texture of each organ following the vascular ramification, keeps each organ in' regular line of duty. The spinal nerve filaments which join this system at the ganglia on either side of the spine are found to send their filaments in company with the fine terminal fibres of the organic nerves. Whatever disturbs or acts upon one system of nerves will, when extreme or of long duration, make itself manifest in the other. The peculiar analogy between the nervous system and an electric battery, gives us basis of deduction that would not occur in absence thereof. The electric fluid of the battery has its similar in what is denominated "neuricity," while the central cells, with their dendrites, are in the nature of a battery, the axiones being the wires. Now, if we should carry out the analogy fully, we should be led to see that anything that occasioned a waste is comparable to the short-circuiting or grounding, so to speak, of the electrical circuit. Hence disease or injury from physical or psychic shocks which draw heavily upon our powers of resistance, could in time deplete from the supply of nerve fluid so as to reduce to debility the whole system. Again it has been proved that nicotine applied to the pre-ganglionic fibres, or when injected in sufficient amount, paralyzes the action of the organs supplied therefrom. Cutting of such nerve root also paralyzes the organs ; hence we infer, that whatever depresses the cerebro-spinal system will finally debilitate the functions of such organs, supplied thereby. Irritation of the sympathetic causes contraction of the arterioles and capillaries and, as in case of the nerve supply to the eye, we find that the irritation of the sympathetic in the neck will produce an enlargement of the pupil, but a complete severance of the nerve will produce a contrary effect, showing that the dilator muscle of the iris is supplied by the sympathetic nerve. Hence we see that anything that disturbs the normal workings of this system, produces organic changes. Therefore we are warranted in concluding that mental, moral, emotional, traumatic or toxic influences, while borne of a time will, if continued, reduce,below normal efficiency the working of the whole system—neurasthenia supervening.

Flushings are due to temporary suspension of organic nerve influence in the vasomotor system. Internal congestions and inflammations are simply more extreme stages of this suspension of sympathetic nerve control over the blood supply of an organ or texture of body. Chills of the surface to-day, making themselves manifest on the morrow in internal congestions, are at first resisted by the defensive force of sympathetic nerve control over the internal circulation. But when tired in this defensive act, the weakened powers of the nerves yield to the pressure of blood, then internal congestion or possibly an inflammation, may result. Toxines, psychic or physical influences, which lower the tone of one or more parts of the body, must obviously tend to weaken the organic nerve control of such, thus inducing disease therein and acting as an avenue of escape of neuricity. Similarly any such morbid forces will likewise disturb the normal formation of the enzymes or catalytic ferments in completing the end products of digestion.

Thus the enzymes are changed in their nature and action by feeling the force of such physical or psychic shocks .

When the opsonic index is superseded by the morbid wave, debility or disease, or both, may result. It may be neurasthenia simply, or it may be such with complications precedent, synchronous or sequent.—*New York State Journal of Medicine,* January, 1908.

CORONARY SCLEROSIS.

It is gratifying to read in foreign medical literature such an excellent article by an American as that by Schmoll, of San Francisco, in the *Muenchener Medicinische Wochenschrift* for October 8, 1907, entitled, "Concerning Motor, Sensory and Vasomotor Symptoms Caused by Coronary Sclerosis and Other Diseases of the Left Side of the Heart.

Schmoll points out the fact that owing to the sudden and distressing symptoms of angina pectoris which the physician first of all attempts to relieve, there has in general been very little opportunity for close study of the detailed symptoms. From observations by himself and others he discusses the symptoms more in detail. He is convinced that the symptoms of angina pectoris conform with a segment lesion caused by the heart disease, and express themselves either in symptoms of irritation or of paralysis. The intensity of the anginal symptoms corresponds in genneral with the intensity of the heart disease. In coronary sclerosis the most intense symptoms occur.

The symptoms of angina pectoris may be divided into three groups—the motor, sensory, and vasomotor. These occur during the interval as well as during the attack.

During the attack the sensory symptoms are of two distinct kinds : the feeling of approaching death and of pain. Though the feeling of death is foremost in the mind of the patient, the pain is of greater interest to medical science. In the majority of cases the seat of the pain is located in the eighth cervical and first dorsal segments, though it has been found anywhere between the second cervical and eighth dorsal segments. Often there exist zones of pain, with zones of freedom from pain intervening. In most cases the pain is only left-sided, but in a smaller number of cases it is symmetrical, occurring also on the right side. Where there is right-sided pain the author has always been able to demonstrate disease of the right side of the heart, and he therefore concludes that right-sided pain is a symptom of disease of the right heart.

The motor symptoms during the attack, either manifest themselves by irritation or by paralysis. One irritation symptom is the sense of constriction, as if the thorax were grasped by an iron hand, which is caused by a tonic spasm of the intercostal muscles. The pectoralis major is also often tonically contracted. Mackenzie has shown how these contractions correspond to the rigidity of the abdominal muscles over an inflamed place in the peritoneum. In occasional cases symptoms of paralysis are more pronounced than the sensory symptoms of irritation, and conditions of transitory weakness of the left arm may even occur as the equivalent of an anginal attack. Accompanying this condition is a feeling of anxiety which is no less in intensity than in the ordinary attack of angina.

The vasomotor symptoms in each case are very distinct. Ordinarily vasoconstriction in the segment concerned is the predominating factor. The first sign may be a deadly paleness of the left hand. In an occasional case vasodilation predominates over vasoconstriction. Nothnagel has designated as "angina vasomotoria" those cases in which the vasomotor symptoms predominate, and Curaschmann has recently shown by autopsy that with these symptoms the affection is only an a typical course of coronary sclerosis.

During the interval, the patient is shown by examination to have the same variety of symptoms in diminished form. Sensory symptoms manifest themselves in the form of a hyperæsthesia of the segment concerned in the attack. This hyperæsthesia is also present in the underlying muscles. The patients often have a feeling of pressure over the precordium which is constantly present, and is exacerbated at the time of the attack. Occasionally there is paræsthesia in the segment concerned, and even anæsthesia is rarely observed.

Among motor symptoms during the interval increased tone of the muscles in the hyperæsthetic area is commonly found. These muscles are ordinarily weak and tire easily. Complete paralysis of the muscles in the segment concerned is very rare but has been observed.

Of vasomotor symptoms, instead of vasoconstriction which is generally present during the attack, vasodilatation is generally present during the interval, giving the hand a cyanotic color. This condition however alternates in certain cases with periods when, without other symptoms of angina, the hand becomes deadly pale.

The author reports a typical case of angina pectoris, caused by fatty heart, and adds a case with anginoid symptoms caused by mitral stenosis, pointing out the differential diagnosis. The anginoid symptoms ordinarily have a certain periodicity; returning with great regularity at certain hours, and especially at the hour of retiring at night. The attack lasts hours or days and does not have the clear dependence upon overexertion or excitement as a cause, as does angina. Anginoid symptoms commonly begin slowly, as distinguished from the sudden onset of angina. The feeling of impending death is only present in a few cases, and then not to such marked degree. Occasionally, however, the differential diagnosis is a matter of great difficulty.—*New York State Journal of Medicine*, Jan. 1908.

DIAGNOSIS ESSENTIAL IN THERAPY.

By Dr. P. Jousset.

Many homœopathic practicians chiefly the Anglo-Americans, have the habit of never formulating a diagnosis, and content themselves with obtaining the symptoms experienced by the patient; then considering the drugs which correspond to these symptoms, they establish, so to speak, the differential drug diagnosis to find the medicament best suited to the particular case. This method, aside from the fact that it is antiscientific, has some great practical inconveniences which we shall point out. We are obliged to add, that the homœopaths of whom we have just spoken follow the instructions and examples given by Hahnemann, This defective clinical method is the direct result of errors in general pathology, as evident in the Organon as in the preface to the Chronic Diseases.

I regret the necessity in the course of these articles upon homœopathy, of again criticising severely the errors due to Hahnemann. Because of such criticism, however, which to me appears absolutely needed, I should not wish to be considered as an adversary of Hahnemann. I declare that no one more than myself admires the genius of this man, to whom we owe the greatest reform in the history of medicine ; who is actually the father of modern therapeusis, and who may be justly termed the prototype of Pasteur.

But, if Hahnemann, through one of the luminous visions which belong solely to men of genius, created an experimental materia medica and put into practice the infinitesimal dose, he was not thereby obligated to know better than the physicians of his day the problems of general pathology. If he refused an essential, specific nature to acute diseases, and then by an inexplicable contradiction considered all chronic diseases as the products of the three hypothetical miasms, the two errors were pertinent to his epoch. Because of this, J. P. Tessier, fifty years ago, was moved to remark : "The teaching of Hahnemann contains two hemispheres ; pathology, correspondent to error ; therapeusis, correspondent to truth."

It is astonishing that Hahnemann, deprived of the certainty which general pathology gives to medical teaching ; intoxicated with the success that followed long years of persecution ; disturbed by the adulation of his disciples, should have abandoned the sure methods of experiment and allowed himself to be swept off by the current of exaggeration common to transcendentalism.

If I criticise the errors of Hahnemann, it is done to assure the permanence of his success, and that dispassionately ; if I deplore his mistakes, it is only after having rendered to him all credit for the great truths wherewith he has enriched science.

* * * * * *

It is necessary, then first to consider the nosology of Hahnemann as found in his books. In his definition of disease, every malady is due to a disharmony of the vital force : "It is only a deranged vital force .... that produces diseases" (Organon, §12.) The same idea is expressed in similar terms in §§14, 29 and 70.

Hahnemann then divides diseases into acute and chronic, and with regard to acute disease teaches that they become apparent to our observation through the symptoms and lesions peculiar to each individual case ; that we have to occupy ourselves solely with this complexus of observable phenomena ; that there exists no morbid species ; and that the traditional names given to different symptomatic groups should be suppressed because they embody and propagate the errors as to the nature of diseases.

This opinion of Hahnemann is found a number of times in his works; the following passage seems to well express his thought: "The homœopathic physician, who does not entertain the foregone conclusions devised by the ordinary school (which has fixed upon a few names of such fevers besides which mighty nature dare not produce any others) so as to admit, of the treatment of these diseases according to some fixed method, does not acknowledge the names jail fever, bilious fever, typhous fever, putrid fever, nervous fever or mucous fever, but treats them each according to its several peculiarities." (Note to §73.)

Hahnemann divides chronic diseases into three species, each due to a miasm (infection); the syphilitic miasm, the scyotic miasm, the psoric miasm.

Of the pretended miasmatic diseases but one actually exists, namely, syphilis. As to sycosis or the condyloma disease, we have here merely an artificial classification imagined by Hahnemann, which is applicable either to simple warts, to hemorrhoidal or other excresences, but particularly to blennorrhagic vegetations.

Psora or "itch" designates a class of diseases absolutely artificial, due to the imagination of Hahnemann, and in which, together with lepra, he includes all cutaneous affections, and hence all the chronic diseases not appertaining to lues, viz.: rachitis; all hemorrhages; convulsions, ulcerations, phlegmasias, atrophies, paralyses, alienations of all kinds: "In a word, the thousands of chronic affections, to which pathology assigns various names, are nothing but the succedanea of a polymorphic psora." (Chronic Diseases, p. 12).

On the next page, he completes his thoughts by saying:

"All of these diseases are derived from a single, enormous fundamental disease, whose almost innumerable symptoms form but a whole, and they should not be treated or considered save as members of a single and unique malady."

It would seem, at first glance, that Hahnemann, at least in regard to chronic diseases, were a partisan of disease-species, since he says that all these so diverse affections are due to one and the same disease, and require an identical treatment. But since, in resume, of these three great types of chronic diseases, lues may be excepted as the only one actually constituting an essential, specific disease, psora and sycosis are nothing but artificial designations.

In §82 of the Organon, Hahnemann modifies and complicates his theory, already so contradictory, of chronic diseases. He remarks that all psoric affections should be treated as members of the same disease-species, and then adds: "Nevertheless, to establish these indications in each chronic affection which he is called upon to treat, the homœopathic physician should none the less endeavor to grasp, as heretofore, the appreciable symptoms and all else of a particular nature; for it is no more possible in these diseases than in any others to obtain a veritable cure, without individualizing each particular case rigorously and absolutely."

Hence, Hahnemann denies altogether the existence of morbid species both in acute and chronic diseases; in regard to the latter he says clearly that the traditional names used to designate diseases should not influence the true physician, who should occupy himself solely with the totality symptoms. "It is clear, that these useless disease-names, so much abused, should have no influence upon the plan of treatment adopted by a true physician." (Organon, §81, note.)

Therefore, in chronic as well as in acute diseases, the totality of symptoms is the physician's sole guide; as to chronic diseases, Hahnemann injects the hypothetical theory of causative miasms, and as corrolary establishes three classes of medicaments: antisyphilitic, antisycotic, and antipsoric medicines, destined to combat the miasm etiologic in the disease. He thus reverts to the galenic and etiologic therapy, since his therapy is directed against the cause, and hence he practices alloeopathy without knowing it.

Hahnemann, in all the theories which we have mentioned, very clearly shows himself to be spiritualist, i.e., vitalist. The parts of the body, he says, do not come under the domination of physical and chemical laws but are governed "by a fundamental, inexplicable, and omnipotent force." (Organon §9.)

A few lines further on, he adds that diseases are dynamic, not of a material nature! We shall simply call attention to the qualities attributed to the vital force, and to the somewhat singular opinion that there is nothing material about disease.

Let us add, however, that with great good sense, he justly considers the alterations in humors and tissues as effects of the disease, as morbid products. (§9, 10, 11, 12 *et seq.*)

Hahnemann, not admitting morbid entities, and considering each pathologic condition as accidental, formed only by a totality of symptoms, was not qualified to make a diagnosis. In the only two observations of his with which I am familiar, he is content to enumerate carefully all of the symptoms presented by the patient, and then he searches in the materia medica for the drug corresponding to the totality of symptoms. Hence, it is not astonishing that a great number of his pupils should have followed his example, and, that even to-day, in spite of the progress of general pathology, in spite of the acceptation by the vast majority of physicians of the doctrine of the essential nature of diseases, they continue with their exclusion of diagnosis.

We shall now endeavor to demonstrate the disadvantages of this method, that thereby all followers of Hahnemann may be led to practices actually scientific.—The *North American Journal of Homœopathy*, February, 1908.

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ACTION AND EFFECT OF MEDICAMENTS.

By Dr. G. Sieffert.

Pretended primary effects, secondary and opposed.

The problem so often discussed and not even solved has come to replace the first plan of general therapeutics, at a meeting of the clinical conference of Dr. Huchard and an article has been published by Dr. P. Jousset in L'Art Medical.

"It must have been known and admitted," said Dr. Huchard "that all medicaments possess two actions: the primary action and the secondary action, which is opposed to the first. It must have also been known and admitted that all medicaments produce in a big dose the inverse effect of that which is realised in a small dose." •

Dr. P. Jousset referring to the instructions of Hahnemann has condensed the phenomena in which they form three laws of pharmacodynamics:

"I. *A moderate dose of medicament, administered once to a healthy person, produced two opposite effects. The effects could alternate many times during the duration of action of the medicament.*

II. *If the dose of the medicament be larger, less primary action is marked. If the dose be excessive, secondary action is only developed.*

III. *With very small dose primary effect dominates and secondary effect often becomes wanting.*

We, ourselves, have formerly sacrificed this theory. To-day, after the new researches, it appeared to us very contestable, especially in the article so aimed at pointedly. Dr. Jousset concluded that "the medicaments which have the curative action, have only their curative property by the secondary action."

The sense presented by our master is, the reaction of the organism to the action of the medicaments. It is given in so uncertain language, that it is necessary to expound the question in order to have a clear view and follow the reasons very closely, lastly not to mistake the sense of the used expressions.

At first, to prevent all confusion, it is necessary to distinctly separate the phenomena designated by the name "of successive effects of a moderate ponderable dose unique" with the pretended effects, "opposed" to the result of the doses.

It is necessary to clearly specify which is proper to call *primary effect* and *secondary effect*. Hahnemann on principle said, "primary action" the phenomenon which arises in the first place and "consecutive action" the reaction which is produced at last, when the experiments are conducted in small doses. Later on, he has attributed the primary action to strong doses and the consecutive action to the feeble doses. Actually, Dr. P. Jousset referred to large doses the secondary effect and reserved the primary effect to the small doses. This manner is observed to definitely prevail in homœopathic language, without which it may be that the remaining portion will be better justified than the preceding. If we provisionally hold the latter, we can, at last, precisely examine if the two expressions are bound to agree and it is significant in point of view of chronology. It is also clear that this confusion between "action" and "effect" can only end in misunderstanding. The error is originally imputable to the French translators of the Organon who have indifferently employed the expressions. By comparing the text with the context and the same with the literal translation, it has become evident that Hahnemann wished to speak "action" with *Erstwirkung* and "effect" with *Nachwirkung*.

All we say, in this connection, is to fix the ideas and precisely point out for the discussion. "Only one and the same cause can not produce two different effects that they may be successives." It goes contrary to logic to support an argument which falls down for another reason, against the reality of facts. Generally, the errors repose on an inexact comprehension or a defective interpretation of the phenomena. Here as elsewhere, the equivocal use keeps up the confusion between the action of the medicaments and their effects. It points out that we, at one time, wrote puerile chicane of dictionary.

At the beginning, Hahnemann has, as we said, given the just view in paragraph 63 of the Organon. He wrote: "All powers operate on life, all medicaments disagree more or less with the vital force and produce in healthy man a change which can last more or less for a long time. One calls the change the *primary action*. Although produced at the same time by the medicinal force and the vital force, it belongs, however, more to the force whose action is exercised on us. But our vital force always tends to display its energy against this influence. The effect which results from this action, which belongs to our vital power of conservation and which depends on its automatic activity carry the name of *consecutive action* or *reaction*." And in the following paragraph: "As long as the primary action of the artificial morbific power (of medicaments) lasts upon the healthy body, the vital power appears to play a purely passive role as if it is obliged to follow the impressions of the power which works from without, and allows to be modified by it."

Dismembered of these philosophical considerations, the text we have shown formulates at the same time the medical force of nature, the definition and its principle, of the medicament and the germ of the law of fundamental biology.

Hahnemann understood by primary action of the medicament "the power by which action is exercised on us." In another way, he said, the concomitant, essential excitation which characterises the taking of possession by the medicament of the cellules of the organ and of the organism. He called the consecutive action or reaction, the real effects, more explicitly, the morbid process in healthy man, the curative process in the sick person and the reaction of the organism by the action of the medicament.

The following facts have been established again and again: the medicinal mechanism, the manner by which the modifying agent is carried opposite to the organism; the excitation in healthy man and in sick person, the morbid reaction in healthy man, the curative action in sick person. But in each case, neither this action nor that reaction, can be manifested in two different fashions. We were not deceived, when we said, that a larger dose than this can not work varieties—it is a quarrel of words. We also said that we were not deceived when we contended of the provocation of the two pretended effects, different or successive, by the same dose.

As initial fact, we begin with the experiments of Hahnemann with very small doses. The works of Drs. A. Robin and Bardet and the laboratory experiments of Dr. P. Jousset have irrefutably established the action, until then doubted, of the infinitesimal doses. The mechanism is invariably the same, whatever may be the dose employed. We will examine to prove the diversified eventualities in holding a reckoning of the receptivity of the subject and the facility with which the medicinal substance is absorbed. It is likewise proper, which is a well known fact of experience, that medicaments act on one part in reason of their proper nature, and the other part according to their degree of solubility, not all equally and speedily absorbed by the economy. It evidently results in difference with regard to the rapidity of their entrance in contact with the organism.

1. *The substance is rapidly absorbed and the dose is small.*

The entrance for contact, the capture of possession, the excitation which is said to be immediate, and the reaction, follow close to the action. In every healthy man this feeble excitation is not always capable to provoke apparent pathogenetic symptoms, although the production of the symptoms does not appear doubtful, yet in the case of more excitable persons (law of Ritter-Vali), the feeble excitation often suffices to bring again to the normal, the troubled function of an organ. *In this case we agree that the re-establishment of health is owing to the pretended primary effect.*

2. *The substance is rapidly absorbed and the dose is very large.* Conforming to the fundamental biological law, the function of the interested organ can find itself completely abolished by the intensely forcible action of the exaggerated excitation. We know, according to the phenomenon described by Claude Bernard of "vital lesion," that this excessive excitation can eventually cause death. This, of course, constitutes the extreme case, and it is admissible that in these conditions of immediate intoxication, the homœopathic phenomenon, called the primary effect, could not for the time be produced. Death came by the secondary effect, more explicitly by the violent action of a highly material dose.

In other conditions, either by less toxicity of the substance, or by less rapid absorption, the excitable action performs the abolition of the temporary and relative function. It can present under circumstances where this sort of abolition may be commanded, and *when cure results from this practice, it is clear that it is imputable to the large dose* (secondary effect).

We will not ignore what M. Charles Richet has said : "There is in toxicology, an absolute rule which is often forgot, that all destructive toxic action is preceded by an excitable action, more or less prolonged, more or less stable. Each cellule which dies by a poison, before death is stimulated into action." But in the case which we have taken, the excitable action which follows the first contact of the first small quantity that arrives at the destination, is so transient that it passes unperceived. The feeble intensity is instantly swept away by the depressing action of the large quantity of the medicament which immediately predominates, by its entrance and contact with the organism. The law fixed by Claude Bernard is not a worthless thing to be verified, notwithstanding the contrary appearances. "*All sub-*

stances which in small dose excite the property or the function of an anatomic element are destroyed by a large dose."

Opportunely to this phenomenon of depression, it explains the action of paliative medication. In abolishing the function, the sensibility is destroyed by the same stroke. We have not the pretension to understand any thing else in telling that paliation does not signify cure. A hypodermic injection of hydrochlorate of morphine temporarily masks the painful sensation caused by intercostal neuralgia, but it can not pre vent the return of the neuralgia. Large dose of mercury and iodide of potassium have temporarily stopped the process of syphilitic manifestation, they have not been able to oppose their reappearance. The massive doses of sulphate of quinine can interrupt the recurring access of intermittent fever, not without having the definite reason of periodicity. It seems that the paliatives momentarily deaden the sensibility of the organism, rendering at the same time, the insensibility for a limited period. The morbid influence which is left behind subsists in latent condition. *Consequently, it is properly said that the case is not cured.* The curative domain of the pretended secondary effect is singularly limited.

3. *The dose is moderate and the substance is rapidly absorbed.*

The medicinal action with little excitation, makes itself immediately perceived from the first contact between the substance and the organism. But to cause facility with which the substance is absorbed, to measure the increased absorption and the progressive excitation in virtue of the fundamental law of biology, the symptoms of depression following the rapidity of absorption and the quantity absorbed, take the place of the phenomenon of excitation by small dose. It comprehends the law of E. Hale concerning the action of astringents. It equally explains the phenomenon described by Dr. P. Jousset in the thesis of Dr. Calvet.

Perhaps the receptivity of the subject may not be abnormal, there may not in the meantime with the doses be any accident of intoxication to be feared. But it can not be argued, any more, of the mechanism of successive production of the two opposed effects, since the quantity of the absorbed substance is increased. It is always the extent, more or less great, of the contact which gives us the measure of excitation, and this in its turn gives us the measure of the produced effect. It is not that as Dr. P. Jousset thought a "durable effect of the moderate ponderable dose." Many degrees of excitation are successively determined by the successive different doses. If in these conditions, the small accumulated excitations occasionally provoke depression, it is that the small medicinal doses successively absorbed are also accumulated, their elimination is not proportional to the absorption. This disadvantage is susceptible to arise; it should be looked after. Elsewhere, it may be comprehended that successive small doses, sometimes, act in the manner of an unique massive dose.

Except the case where it has a place to provoke functional depression, it is the small dose which agrees in general to apply, since it very often suffices for the excitation that it develops, to bring again to the normal state the deviated function; if the excitation is required to be renovated, the successive administration of small doses is better than the large dose; indeed the little dose is capable to entertain without inconvenience a durable excitation. *The cure has the aid of the so-called secondary effect.*

4. *Large doses sometimes act in the manner of little doses.*

The contact is, here as always, the great regulator. It depends, we have said, on the facility with which the substance is absorbed. The phenomenon is especially ascertainable from the hypodermic injection of the insoluble salts of mercury. The circulatory current only carries on the economy of the particles, entirely infinitesimal of the salts; nothing astonishing, since then, that they act in the manner of the infinitesimal doses.

It is, also, comprehended that in like manner, as certain homœopathic practitioners habitually use in their practice only mother tinctures or low attenuations in doses tolerably massive, good curative results are being obtained. In reality, the prescribed medicament in large doses is not easily absorbed; it only attains the destination by fractions of successive minims, when it is not toxic.

The rest, however, may thus be explained on the accumulative phenomenon; and since it is definite that the result is the same, they atleast act on with small excitation by small successive doses, so much the more as they thus avoid the eventual depression of function.

It is, however, indisputable that sometimes cases are seen, in which an unique dose, after a variable period of hours and days. consecutively starts up two sorts of phenomena, the first resorting to excitation, and the second to depression. Are they reactions, the one of the other? Do they, solely, connect themselves in the sense that it is desirable to call the effects primary and secondary?

Dr. P. Jousset has so supposed with regard to these facts, raising it again in the thesis of Dr. Calvet. It appears the same to believe another point of view which M. Huchard has relatively described the cardiac and the diuretic actions of digitaline.

So it has come to pass! A simple phenomenon of contact! In the case cited by Dr. P. Jousset, a small quantity of the dose has first been absorbed, from which the phenomenon of excitation takes place; later on, the absorption increasing, it appeared with the growing action of the augmented dose, the depression—two different effects owing to different doses, by successive absorption. Perhaps, it is only necessary to seek elsewhere of this fact so that it is agreeable to call it "the duration of action of the medicaments."

With the example of M. Huchard, the result is still more striking; the diuretic action and the cardiac action are two different facts but not opposed to one another.

5. *Large doses often intervert the chronologic order of the two pretended successive effects, and these effects can alternate between them during the duration of action of the medicament.*

The phenomenon reappears as in the preceding case and the solubility with more or less extended and prolonged contact plays, therefore, this time, the principal role.

Martin Magron and Buisson have experimented on this subject, on frogs poisoned by a large dose of strychnine. After the first period, sometimes very short, at times with nothing except feeble convulsions, the paralytic phenomenon suddenly follows. After leaving the frogs in a better state, Vulpian has ascertained that "the elimination of the poison takes place little by little; the modifications of the spinal cord gradually disappear, it makes a sort of reparation by rest and nutrition; the lethargic state dissipates itself more rapidly than in the poison by mercury and then the same phenomena are observed which precede apparent death. During a period which varies between a few hours to two or three days, the convulsions arise and cease afterwards, the animal fully returns to the normal state." In poisoning by hemlock it produces an analogous fact. "When the dose of cicutine," said Rabutean, "is not sufficiently large to cause death, the paralytic period is followed by a period of return to a better state. The movement first reappears, the general sensibility afterwards."

We have done more than enough with the interpretation of the phenomenon. The alternation is subordinate to elimination. It is, consequently, superfluous to say that it reappears, as in the preceding case, the whole mechanism is reduced to contact.

6. *Small doses produce inhibition at the first onset.*

This error has been propagated by Hale, on the subject of the alkalies of bromide. The American therapeutist has formulated a law, radically false, found in the *New Remedies.*

Experience has precisely established absolutely contrary opinion to that of Hale, and verified in a manner the law of fundamental biology. More the dose is large, more the medullary function goes towards abolition; on the other hand with small doses, although found in the works of Hale, the dynamogenic action can be provoked, which is believed to be non-existent.

Whence came the error of Hale? The clinical experience we taught with regard to it. Given a patient large and repeated doses of bromide and on suddenly stopping the administration, it produces symptoms of cerebral and medullary excitation. Hale has concluded that such is the action of large doses, and logically inferred that small doses create depression. This inference is completely erroneous. Here it can not, in fact, be a question of the development of action of a moderate dose; the administration of a large dose has simply been suspended. In a similar case, as is known of the morphiomaniacs, the medicament produces by suspension mithriadatism in favour of elimination, a return of the dynamogenic phenomenon, without the intervention of any reaction, excitation is normally developed by the regular action of the dose becoming again small.

That there is in substances, a few possessing more than others, a tendency to the phenomenon of inhibition, this is beyond doubt but this tendency is held by the proper nature of the substance.

7. *Medicaments, sometimes, produce, in all doses, parallel phenomena.*

Ought we to call it secondary? Not certainly. Medicaments act either on an error of diagnosis, and since then on the action of a misapplied medicine, or on an organ, artificially or pathologically excited, but the excitation reappears on a neighbouring organ.

8. *The pretended primary and secondary effects sometimes succeed without transition.*

Naturally, the phenomena are explained again by contact. But as we can not differentiate one effect from another, this fact is the best proof that we can not establish a demonstration of the law of similitude on this confusion.

Definitely, therefore, they have been brought back to the principal formula of Hugo Schulz. "*The action of each medicament which impresses any organ of the human body manifests in two forms. It is seen either to increase the function of the interested organ or descend under the normal. The two manifestations depend first on the quantity of the medicament which succeeds to come in contact with the organism.*

For these reasons the expressions "primary and secondary effects" are singularly susceptible to create confusion; we appear to be obliged to erase the pharmacological vocabulary, purely conventional, absolutely subjects of caution, regarding the chronology of the phenomenon. They do not convey either theoretically or practically any precise fact. They can, we think, advantageously replace them by the just expression "the action of the medicaments is proportional to the dose."

It is, therefore, erroneous desiring to attribute either the pathogenetic effect or the curative effect of these effects which do not exist. It is more erroneous desiring to base on a false theory a demonstration of the law of similitude. The fact remains that diseases are cured soon and very often by the action of small doses, and sometimes by large doses. To the new interpretation of Dr. Jousset, we infinitely prefer the theory which developed in 1878, at the International Homœopathic Congress of Paris, when he said :

"To conform to the law of similitude, we are in duty bound to select from the double action of the medicaments, that which resembles a pathological case to combat, that is to say, to employ the infinitesimal dose to combat the analogous symptoms of the produced effects, in healthy man by small doses of the medicament, and employ ponderable doses against the symptoms that we observe in healthy man produced by large and toxic doses."

This translation of our fundamental laws comes very near to the truth. It, moreover, has the great merit not to confound the action of the medicaments with their effect. More clearly we can say :

"To conform to the law of similitude, it is necessary to choose the dose whose action produces in healthy man, a totality of pathogenetic symptoms resembling the totality of the morbid symptoms that are desired to combat."

Now, it goes that the action of the medicaments must be different according to the doses, and that it consequently provokes the reactionary effect, pathogenetic or therapeutic, which correspond to these doses. Does it result that effects will be opposed to one another ? Perhaps, it has hastily been affirmed, and willingly a general theory has been constructed upon these facts, in considering them as reciprocal reactions. The reaction, in these conditions, is an organic law which pharmacodynamics has sometimes verified according to the physiological and the pathological state. After diarrhœa constipation ensues; after sweat dryness of the skin follows; after acceleration of pulse there is relaxation. In some circumstances therefore—as in the example of the effect of *Iris Versicolor* cited by Dr. Abel Claude in a case—the law of compensation is verified.* It can further support with regard to constipation consecutive to purgation, in the subject of diarrhœa which succeeds suppression of the poison in morphiomaniacs; thus for a certain number of effects of suspension mithriadatism follows. But as a general rule, the theory of reaction from medicinal action, coming against another is insupportable by this fact alone, that the action of large dose is known to manifest the primary action or its opposite. For rigor, it may be possible to pretend that a phenomenon can happen sometimes directly, sometimes as reaction, following that it can show itself primarily or secondarily,—what importance does it carry? It is sufficient that a phenomenon is able to be directly produced by a medicament, for it acquires the same value as the phenomenon which is opposed to it. This reason is peremptory,—what good is it to invoke others.

We precisely find the proof of these statements, we have advanced, from the example borrowed from Dr. Huchard. The diuretic action and the cardiac action are not opposed phenomena. They are differently provoked by the action of different doses of the same medicament.

Since then, the effects being not opposed, but different according to the doses, it appears rash intending to authentify the law of similars by an opposition of effects which do not exist; and that they go for the successive effects of the one and the same dose which do not also exist. Supporting that the medicaments cure by their "durable effect" by the pretended "secondary effect," and uniquely in this fashion, it therefore constitutes an abusive interpretation. Finally, the medicinal action is always identical, invariably moving itself with the effects which they carry in the physiological frame-work of excitation.

—*L'ART MEDICAL.*

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

For the Month of March, 1908.

Date.	Barometer. (corrected.)	WIND.		TEMPERATURE.		Humidity.	CLOUD.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·754	S	4·5	90·0	68·0	84	1	No Rain.
2	29·859	E	4·8	89·8	69·5	65	*Nil*	
3	29·906	N	2·6	89·8	66·5	38	”	
4	29·898	W	2·4	85·2	69·5	95	8	
5	29·836	Calm	2·6	88·8	68·8	90	*Nil*	
6	29·769	W	2·9	92·0	68·0	60	”	
7	29·792	N	3·0	95·5	70·2	70	”	
8	29·864	W	3·7	95·5	71·2	43	”	
9	29·902	Calm	2·6	95·0	71·2	86	”	
10	29·944	E	1·9	93·8	71·0	38	”	
11	30·010	E	2·5	91·0	69·5	26	”	
12	29·960	S	2·1	90·5	72·0	91	4	
13	29·929	S	4·1	94·5	73·2	77	6	
14	29·934	N	2·6	94·5	72·0	23	*Nil*	
15	29·920	E	2·3	87·2	71·0	54	4	
16	29·938	N	2·4	89·6	75·0	86	9	
17	29·949	E	1·9	89·8	73·0	95	*Nil*	
18	29·931	S E	3·1	91·0	72·2	76	”	
19	29·962	S	2·3	92·6	76·0	83	5	
20	29·998	S	3·4	93·0	76·0	79	1	
21	29·998	S	3·4	93·0	79·0	79	4	
22	29·956	E	3·1	94·0	76·5	83	7	
23	29.914	S	4·6	96·8	77·2	83	*Nil*	
24	29·905	S	3·4	95·4	78·0	79	8	
25	29·967	S E	3·0	93·5	78·5	87	6	
26	29·919	N	2·1	93·8	79·0	60	9	
27	29·972	E	1·6	93·0	79·0	71	7	
28	29·962	N	2·4	90·0	75·2	53	5	
29	29·888	S E	2·7	96·0	77·0	47	*Nil*	
30	29·797	S	2·2	99·0	77·5	70	”	
31	29·746	S	3·0	99·0	79·0	74	”	
Mean	29·841	26°S 45°E	2·8	94·0	73·2	72	3	

From January the atmospheric pressure was gradually declining. The mean pressure in January was 30·070, February

29·935, and in March 29·841. The mean direction of the wind was East. The mean velocity of the wind per hour was 2·8 miles. The mean maximum temperature was 94 and the mean minimum 73·2, shewing a difference of 20·8 degrees. The mean humidity 72 per cent. was present. There was no rainfall.

During the month of February, we noticed the unusual prevalence of cholera after the Ardhoday jog. In the week ending the 29th February the mortality was 120. In the week ending the 7th March it was 128. During the week ending the 14th March the death rose to 151. In the week ending the 21st March there was further increase to 204 and in the week ending the the 28th March, the figure of mortality 252 was recorded. In the period of two months all the sections of the town were more or less affected. The worst effect was observed mostly in the northern division, of the town including Entaly, and in the old foci of the southern division, Balyganj Tollyganj and Bhawanipur. The after effect of the pilgrimage was disastrous as the disease spread not only in the town of Calcutta but also in whole Bengal. In rural areas scarcity of drinking water was an additional incentive. The havoc may be well imagined when we say that a few villages in Bengal were nearly depopulated.

The mortality from plague, in the week ending the 29th February was 31. In the week ending the 7th March it rose to 55. During the week ending the 24th March it was 67. In the week ending the 21st March it came up to 104 and in the week ending the 28th March, the high mortality of 115 was recorded. During this week deaths from cholera were 115, from plague 115, and from fevers 136. It may be said that sanitation and public health of Calcutta was as bad as in the previous quarter of a century.

Mortality from small-pox ranged from 11 to 31 deaths in a week. The worst was during the marked week ending the 28th March, when the death rose to 31. It seemed that all dangerous diseases were endeavouring to reap a good harvest.

Deaths from fevers were in the week ending the 7th March 117. In the week ending the 14th March they rose to 137. During the week ending the 21st March they came to 125 and in the week ending the 28th March there were 136 deaths.

Bowel complaints shewed the mortality from 61 to 80 cases in a week.

During the above-mentioned four weeks, the respective total mortality was 698, 729, 807 and 878, making up the figure of 3112. The ratio of death during that period per thousand population was 47·67. The ratio in January was 40·65, February 37·94 and in March 47·67.

EDITOR'S NOTES.

Cheap Food.

The *British Medical Journal*, March 14, writes the following interesting note :

"Insufficient and bad food is a cause of physical degeneration, alcoholism, and sickness only less important than unhealthy dwellings, and we feel indebted to Dr. Cazalis who has already published a work on cheap houses, for a very useful little book on the provision of cheap food which he has compiled with the help of Dr. Lucien-Graux. It is primarily concerned with France, and the authors have a good deal to say about the heavy fiscal dues imposed on food not only at the national frontiers but at the barriers of all large towns; we are told that the cost of meat, butter, and coffee is half as much again in Paris as in London, while sugar is twice and tea four times as dear. Nevertheless it has been found possible in France to supply wholesome, clean, and appetizing food at very low prices, and to make cheap restaurants pay. Various charitable agencies in Paris and the provinces distribute food gratuitously or at very low prices, but it is to the account of those restaurants which pay their way or return a limited interest that we desire to direct attention. It must, however, be noted in passing that there are many restaurants maintained by great industrial companies and employers of labour which appear to be well managed and to afford good and cheap meals; but they are conducted at some pecuniary loss, though this is considered to be compensated for by the better health of the employees, the saving of time, and the check on the consumption of alcohol. One great employer stated that when the workman is well fed he works better, with better temper, is less quickly fatigued, and is less disposed to drink. It is somewhat surprising to be told that the wife of the French working man, like her English sister, is nearly always a bad cook and unable to supply much variety in the fare, so that the husband is disposed to go to a cheap eating-house, where unfortunately he is tempted to drink with and after meals.

The founder of cheap workmen's restaurants in France on a paying basis was M. Mangini, a large employer at Lyons, who was led to organize these establishments from a benevolent desire to improve the condition of the workers. His first restaurant was opened on January 10th, 1892, and the scale upon which it was worked is shown by the receipts in the first year having reached 200,564 francs (over £8,000); the expenses were 187,573 francs, the net profit for the first year being 6½ per cent. At these restaurants a good dinner costs 5d. or 6d.; for this can be obtained, for instance, a slice of roasted pork, with vegetables, bread, cheese, and a decanter of wine, all excellent. The diners wait upon themselves, but there is another room served by a waiter where serviettes are supplied, these amenities costing 1½d. Tokens for the different articles are sold at the entrance—for example, for 5d. a full meal with bread, meat, and vegetables; but separately bread is ½d, meat or fish 2d., vegetables or macaroni 1d., soup 1d., dessert 1d., coffee 1d. There is the choice of three or four dishes of meat or fish, and of as many of vegetables; the wine costs 6d. a litre, and is absolutely pure. These restaurants have stimulated competition; and, though others established on a purely commercial basis, have taken away some clients and diminished the profits, they have provided additional accommodation to meet popular wants.

In Geneva and other Swiss towns similar restaurants exist, and at Zurich a ladies' society has founded a restaurant and hotel for the "air-cure" on the Zurichberg; this is much frequented, especially on Sundays. Everything is supplied at moderate prices, and those who stay there are charged a pension of 3½ francs daily. Many of the Swiss restaurants were started by temperance societies and sell no alcoholic drinks; but the authors, although enemies to alcoholism, prefer those where pure and light wine and beer are supplied, on the ground that they are a better means of combating alcoholism by providing the workman with comfortable social conditions. In Germany there are a number of *Volkskuechen*, or people's kitchens, founded by philanthropic societies and looked after by ladies interested in the work. At those no alcoholic drinks are sold. The prices of the food supplied are about the same as those already quoted. In Berlin there are municipal refectories due to private initiative, but receiving subventions from the municipality; their accounts are audited officially, and their president is always one of the city councillors. This system goes back as far as 1849; the buildings belong to the city; a good meal of meat and potatoes can be obtained for 2d., and the financial results are said to be satisfactory, but evidently they are not entirely self-supporting There are also in Berlin *Warmehallen*, or large halls well warmed and open all day, where meals and hot drinks are supplied; clothes also are sold and mended. A cup of coffee and milk costs ½d., a roll or a piece of bread about

¼d.; two buttered rolls or a portion of soup 4 or 5 pfg., or about ½d. Vienna seems to be supplied with numerous cheap popular refectories.

In Germany great progress has been made in organizing schools of domestic economy and cookery. Wise buying and good cooking are the two most important factors in providing cheap food, but in England, where the raw materials are cheap, there is the greatest waste in its preparation, and the meal placed on the table is too often not cheap, or palatable, or digestible. Attached to the school is a restaurant, from the profits of which the cost of the school is defrayed. Another excellent idea is embodied in the movable kitchens of the Berlin Coffee Stall and Car Company; from the earliest morning hours it sends through the city clean, and even elegant, white lacquered wagons, from which are sold hot coffee, tea, cocoa, bouillon, soup, sausages, and, in summer, cooling drinks, but no alcohol. These are of great service to work-people and clerks whose lodgings are often unprovided with either house-keeper or kitchen. At these coffee stalls a buttered roll, a cup of coffee or cocoa or hot milk costs ½d., two hot sausages 1d. Moreover there is an institution peculiar to Berlin called "Cookery for the Sick," by which medically prescribed diets are cooked and forwarded in thermophore boxes within a radius of 2 kilometres. There are six depots connected with the central kitchen by motor cars, but the separate dishes are delivered by tricycle. The prices are: 3d. for half a litre of bouillon or 6d. for a litre of soup with meat and vegetables, but the prices reach as high as 1½ marks or 2 marks for a complete meal of three or four dishes nicely served. Similar establishments exist at Cassel, Aix-la-Chapelle, Bonn, and Vienna.

One of the results of a Congress of Social Economy organized by the *Journal de la Cuisine* in Brussels in 1902, was the publication of a pamphlet entitled *Budget annuel de l'employe a 1,800 francs,* written by Madame Callewaert, to show how a small income of £72 may suffice for a family composed of father, mother, and two children. The rent of 336 francs a year may be compared with that of an English workman who pays 6s. 6d. a week (336 shillings a year) for his house, and has 25s. a week to live on. That it is possible to live on such very moderate means is shown by the following bill of fare for a day, taken from his *Budget.* At breakfast the parents have coffee and sugar, bread-and-butter, the children have milk and bread-and-butter; at dinner, leek soup (enough for two days), roast pork from the day before, potatoes, endive, oranges; supper, coffee and milk, bread-and-butter, cheese, and the remains of the meat. At other times the supper would be potato salad, sardines, sauerkraut, or eggs or kippers. M. L. Banneux is quoted in support of the contention that the cost of the food of a family ought not to exceed two-fifths of its revenue. The evening meal in these budgets is light, and our authors deprecate the French habit of taking two heavy meals a day; what would they say to the three heavy meals of the British middle and the four or five meals of the wealthier class? The immense economical advantages of a diet composed to a great extent of vegetable food is admitted and the case could be strengthened by reference to Chittenden's experiments. The book concludes with a number of statistical tables and receipts of value to persons interested in food questions.

The problem in which attention is drawn by the authors is one which presses as much for solution in England as in France, although our difficulties are not identical. In England we have an abundance of good and cheap food, but owing mainly to ignorance it is used wastefully. In our great towns the wives of working men seem to have given up cooking; their children are too often fed on bred and jam and their husbands on tinned meat. Food that requires preparation is viewed with disfavour, for cooking is looked upon as irksome; if girls were taught cookery, and taught that it was an art calling for the exercise of skill and good taste things might improve. Meanwhile it must be remembered that there is a large class of men who have no wives, and of girls who are supporting themselves, but have no time to cook their food; for them cheap refectories ought to be provided in all great towns, and enough has been stated here to show that when properly managed such enterprises can be made to pay their way even when food is supplied at very low prices. The schools for domestic economy with restaurants attached would perhaps be the best means of solving the problem of cheap refectories. We should like to see the kitchens for sick-room cookery established in all our large towns."

The supply of cheap food in European Countries is an admirable innovation. In India, it may be cheaper, if the system can be adopted. Among Hindus, it is impossible for the caste distinction. The modern system of Hindu hotels in good style is costly. A single meal of moderate kind cannot be received without paying at least 6 annas or 6 d. This is without meat or milk, but having fish and vegetable curries, rice and dhal. In ordinary hotels with bad kind of food, the charge for a single meal is 3 annas or 3 d. There neither flesh nor milk is supplied. Fish in name only is given. Rice and dhal form the chief stuff. Milk being cheap, it is expected that at least a *powa* or half a pound of milk should be given. Continuance of hotel-diet for a month creates disgust for that kind of food-supply.

Among Mahomedans, the day labourers without family encumbrance resort to *Nanbai's* shop. Tne word *Nanbai* is derived from *Nan* food. *Nanbai* means a baker or cook. This kind of shop is in plenty in the Mahomedan portion of the town. There the food is cheaper than the Hindu hotels. One anna or 1 d will supply a small piece of bread, small quantity of meat and a few vegetables, all freshly prepared. Except Mahomedans poor Jews and Christians resort to them.

Generally speaking, all Europeans have their cooking establishments. But they have great tendency to use prepared foods as jams, jellies and tinned fish and meat, etc. They are imbibing a propensity to laziness, for which they dislike the trouble of cooking. Prepared foods are their favourite supply. After the horrible exposure of tinned meats, it is doubted whether their consumption has decreased.

Hindus and Mahomedans as a rule cook their own food. Not so the Eurasians or Europeans. The prepared foods being rather costly they can not be used by the poor, though they are not so to the Europeans and Eurasians for their costly mode of life. Religious proclivity also prevents them from doing so. The use of preserved foods is certainly a welcome drawback.

Idiosyncrasies.

The *Lancet* of March 14 writes the following interesting note :

"We are assured by the Declaration of Independence that all men are born equal, yet even if it be so in matters political it is certainly not true of their physical natures. We are so accustomed to generalisation in physiology and medicine that we are prone to lose sight of the fact that the individual deviations from that which we are disposed to call the normal are many and great. In disease it is not sufficiently recognised that predisposition is often of equal importance with the exciting cause and sometimes it is of even greater importance. In his recent address in Paris delivered before the Faculty of Medicine Sir Dyce Duckworth emphasised the fact that many of our great predecessors in medicine appreciated more exactly than most of us do at the present time the immense importance of the personal factor in disease. They may have carried the idea to excess but it was based on truth and every practical clinician knows that there must be predisposing factors in the body to lead to the production of a disease. The germ may be present but it cannot grow if the soil is not fitted for it. Against some human bodies germs seem to make assaults in vain, though they may attack with ease the bodies of others. Within the last few years we have learned a little of the conditions underlying this immunity. We know that there exist in the fluids and solids of the body substances which can destroy or neutralise the toxins of the attacking microbes, and the more we investigate the matter the more our astonishment increases at the complexity of the methods by which the body endeavours to shield itself against the assaults of its microbic foes. Even more surprising, however, are the differences existing between two individuals in their means of defence, and the vulnerability of some is especially noteworthy. These differences, however, can be to some extent explained by the possibitity that so complex a mode of defence may readily fail owing to an inadequacy in some small part. When, however, we turn from diseases produced by micro-organisms to the morbid states arising from drugs we meet with conditions even more surprising. Though as a rule drugs are fairly uniform in their action, yet exceptional symptoms are by no means rare. The iodides and bromides can be taken by most people in fairly large doses but in a few severe symptoms may develop even after minute quantities. Opium has been known to give rise to convulsions and many other instances could be mentioned where drugs have caused unusual symptoms when given in ordinary doses or where they have caused severe symptoms when administered in minute quantities.

Closely allied to these anomalous effects of drugs are the results sometimes caused by articles of food. There is hardly any food which at some time or other has not produced strange symptoms, and this quite apart from any decomposition in the food itself. The patient is peculiarly susceptible to that particular article of diet and is affected by it whenever he partakes of it though others may on the same occasions eat it with impunity. From some unknown change in the constitution of the patient's body there should be harmless food acts as a violent poison and in some cases life itself may be threatened. Eggs are pre-eminently responsible for such toxic manifestations and in THE LANCET of March 7th (p. 716) appeared an account by Dr. A. T. SCHOFIELD of a boy 13 years old who could not eat eggs in any form. If he partook of an egg the saliva would flow, the lips burned, there was nausea, an urticarial rash broke out, the face became puffy, and some dyspnœa arose. On one occasion he suffered after eating a bun which had been glazed with white of egg. The effect was probably not produced through the nervous system, as a raw egg applied to the surface of the skin gave rise to a blister. In cases like this the result is not due to dislike or to' 'suggestion," for the harmful effect is produced even when the patient is unconcious that any egg is present in the food. Dr. Schofield suggested that the egg albumin acted in some way on the serum albumin so as to cause transudation, but Dr. R. HINGSTON FOX in a letter in the present issue of THE LANCET offers the theory that eggs contain a powerful decalcifying substance which precipitates the calcium salts in the blood and thus diminishes the coagulability and leads to the transudation of lymph. Cases of egg poisoning are not raro. Rice is another food which is liable to give rise to toxic symptoms and the attacks are generally asthmatic in nature. In one susceptible case some soup had been thickened with ground rice and it gave rise to a severe attack of dyspnœa. In another instance the difficulty of breathing arose after the patient had had some bottled beer to which some grains of rice had been added in order to excite fresh fermentation. A case has been recorded in which honey always produced swelling of the tongue, frothing of the mouth, and blueness of the fingers, and these signs were especially well marked if the honey had been eaten in the comb. It has long been known that if the bees feed on certain flowers the honey which they make may cause various symptoms. It will be remembered that XENOPHON describes in the " Anabasis" headache as being caused by the eating of the honey of a district through which the Ten Thousand passed. It is certain that different honey differ greatly in their flavouring constituents and " heather " honey, produced by bees which feed on the moors is readily recognisable. A case has been described in which the eating of figs produced itching of the palate and fauces. Dr. G. F. STILL in a recent lecture at the Hospital for Sick Children related a case of a boy aged about 14 years who could not take porridge as it made his face swell. As Dr. STILL felt a little sceptical the boy was given some porridge in Dr. STILL's presence and before the boy had finished his meal the face began to swell and within 20 minutes it was so swollen that he could not see out of one eye. Strawberries also are liable to give rise to troublesome symptoms in susceptible subjects.

In all these cases the regular repetition of the symptoms whenever the supposed cause is taken excludes the possibility of the effect being due to some decomposition or impurity. One of the most remarkable facts connected with this curious subject is that the result may be caused by quantities extremely small. As to the truth of these poisonings there can be no doubt and in time we may discover the mode of action. Curiously very little has been done to attempt to remedy these troublesome idiosyncrasies, and they may prove very troublesome; for instance, if a child can never take egg in any form his dietary is distinctly limited, as egg enters a good deal directly and indirectly into the diet of a child. Dr. SCHOFIELD, whose case we mentioned above, has endeavoured to establish a tolerance for eggs in his patient and he has succeeded. A pill containing the ten-thousandth part of a raw egg with a little calcium lactate to assist in stopping the transudation of serum was given every day. The quantity was gradually increased and by the end of six months the daily amount given was one thirty-third part of an egg. A month later the boy was taking a sixth of an egg each day and yet no symptoms were produced. As a test he was given a pudding which he was told contained egg though none was present but no symptoms were produced. Ultimately he was able to eat an egg a day without harm. This very successful result suggests that many, perhaps most, of these cases of intolerance could be cured and some such treatment deserves a trial, for the peculiarity is often very troublesome to its unfortunate possessor."

The *Lancet's* idiosyncracy is that it begins with politics, but without the power of discrimination. The Declaration of Independence in America does not assume that all men are born equal. It declares that certain common rights pertain to all men. In so far they are all equal. It is not a biological problem, but the declaration is an economical study. Self-defence is a recognized principle in all countries. The next question is without the use of arms self defence is impossible against those who have arms and the dangerous animals. It is a well known fact how many lives are lost in India on account of the prohibition to use arms by the native population.

Idiosyncracy to some drugs by certain men are well known facts. Leaving aside large doses, we knew of persons who could not tolerate Nux vomica in any dilution, even when the medicine was administered without his knowledge. Mercurius in a case produced salivation in any dilution. In a case of hæmorrhagic diathesis Phosphorus brought blood without checking it. It is so with Calcarea carb. As for large doses many bad symptoms have been observed. The wonder is the assumption that in all sick persons the therapeutical effect must follow. No room is left to consider that other pathogenetic results may ensue without the therapeutical and the successful effect.

The consideration of idiosyncracy to food is frequently observed. Some persons cannot tolerate milk, while others are susceptible to particular kinds of fishes. A young girl could not tolerate chicken broth though it was prepared without her knowledge and was given as fish-soup. In a few persons arrowroot or barley powder boiled in water produced diarrhœa, on the other hand sago water gave the usual healthy stool.

Ancient and Modern Hindu Medicine.

The *Lancet* writes on April 18, thus :

"In the March number of the *American Journal of Pharmacy*, Dr. Anna S. Kugler deals in an interesting manner with ancient and modern Hindu medicine. The Hindus claim that the antiquity of their medical science exceeds that of any other people. It is comprised in the Ayur Veda, or "Science of the Life," a work divided into 100 sections, each containing 1000 stanzas. Brahma communicated the Ayur Veda to Dakshprajapati who in turn passed it on to the Ashwini Kumars the twin sons of the Sun. The oldest extant treatise on Indian medicine is that ascribed to a son of the Vedic saint Atreya, and hence called the Atreya Samhita. When asked questions by one of his pupils on the origin and treatment of disease, Atreya explained that the Ayur Veda could not be fully explained within the limits of human life and that his pupils would have to be content with his own composition which was completed within 1500 stanzas. The two most frequently quoted ancient medical writers among the Hindus are Charaka and Susruta, who dealt respectively with medicine and surgery. Charaka gave a list of 600 drugs which cause vomiting and purging, and described how remedies should be introduced into the body by means of enema syringes. No less than

125 surgical instruments are described in ancient Hindu works, but the ancients are said to have understood so well the properties of drugs that surgical methods were seldom resorted to. Thus, abscesses were treated by plasters or poultices and urinary calculi by antilithics and diuretics. The Hindus were expert in plastic surgery, their operations including the transplanting of sensitive skin flaps and the forming of new ears and noses. Their skill in this direction was due to the punishment then so common in India of cutting off the nose and ears. They were skilful in performing Cæsarean section and other abdominal operations, and are said to have practised inoculation against small-pox and to have discovered the art of cataract couching. The surgeon was recommended to acquire manual dexterity by cutting flowers, hollow stems of plants and bladders filled with paste, and by putting sutures on skins. Health was thought to be promoted by the exhibition of an emetic once a fortnight, purgative once a month, and blood letting once a year. Among the causes of disease Karma, or Fate, was thought to take a prominent place. The murderer of a Brahmin was said to suffer from anæmia and a cow-killer from leprosy, thus assigning a physical cause for moral delinquency. In diagnosing disease, palpation, percussion, and auscultation were recognised. In the palmy days of Buddhism in India, during the reign of Asoka in the third century, hospitals were erected and a regular system of medical administration was established throughout the country. With the decline of Budhism these institutions disappeared. The contempt of the Mahomedan conquerors of Hindustan for the scientific knowledge of the Hindus and the diffusion of the European system of medicine contributed to a decline of Hindu medicine and surgery. The Sanskrit works became more inaccessible; imperfect copies were substituted, so that confidence was diminished, while superstition and quackery increased. Turning to the present condition of Hindu medicine, Dr. Kugler describes native physicians in uncomplimentary terms. In a large majority of cases they are said to kill the patient by over-drugging or by poisoning with aconite, arsenic, or mercury. The excessive use of mercury accounts for the commonness of cases of ankylosis of the jaw, necrosis of the maxillary bones, and gangrene of the cheek. The native "doctors" frequently take advantage of the superstitions of the people who attribute many forms of nervous and mental diseases to devils. Hence the exorcising of devils and other methods of witchcraft are still practised. To-day there are comparatively few Hindu practitioners who endeavour to combine the modern European system with the teachings of the AyurVeda. The majori-

ty practise hypocrisy and deception. Dr. Kugler hopes that as the years go by, more attention will be paid to AyurVeda medicine by all Indian students of medicine, so that what is good in it may be incorporated into a new system which, belonging neither to the East nor to the West, may be a universal system of medicine having for its object only the amelioration of human suffering and the prevention of disease."

The interesting topic about the antiquity of the ancient Hindu System of Medicine can be found now and then in the European and American Medical Journals. The origin is always hazy being referred to gods. Vagaban Bramha, the Creator of the Universe, first taught it to Prajapati Dakshya, a son of the Vagaban. It is assumed that the Creator himself created the Hindu system of medicine, being, as a rule, cognizant of all facts. The two brothers, Aswini Kumars learned it from Prajapati Dakshya. Then it was handed over to the sage Varadwaj, son of the sage Atri. Being the son of Atri, he is called Atreya. Sage Varadwaj gave the lesson on the system of medicine to his disciple Charaka. Hence the name Charaka Samhita, the famous book on the system.

The second book of importance is by the sage Susruta, who wrote it. He is a son of the sage Viswamitra, a Kshatriya Bramhan. Being a Kshatriya he gained the superiority of a Bramhan by his arduous asceticism. The sage Susruta derived his knowledge from the sage Dhanwantari, a great sage on Medical Science and especially in surgery. The lessons in Susruta Samhita mostly deal in surgery. It is not known from whom the sage Dhanwantari got his knowledge. It may be from Charaka or a subsequent man of medicine. So far it can be said that these two books form the basis of the ancient Hindu system of medicine.

As for the drugs of Charaka Samhita, it can be well doubted about their real identification. The book was written when the Rishis were in the Panjab. A drug from the lower plains of Bengal generally does not meet the desired end. The same drug in many instances is differently identified in different countries. Substitution forms the bulk of the labour of identification. *Visalya Karani* is curiously identified with Eupatorium Ayapana, a plant of South America, acclimatised in India. Further, the poetical form of the Sutrasthanam where the action of the drugs has been principally described has added to the confusion. It is true that most of the native physicians of modern days are charlatans. It would be well o incorporate some of the drugs by the modern methods of test.

CLINICAL RECORD.

Foreign.

CASES FROM PRACTICE.

By Dr. Strohmeyer.

Gonococci.

I. Mr. B. has been troubled now for the second time with a discharge from the urethra, which, as disclosed by the microscope, is due to gonococci. The first attack had been successfully suppressed with *Protargol* and *Argentum nitricum ;* so I gave again *Protargol* 0·75 to 200 *Aqua destillata* so as first to get rid of the gonococci. I may be blamed for not at first going to homœopathic preparations, but in the course of time I have found out by experience that it is often best to destroy the bacteria and then treat the rest of the ailment with homœopathic remedies. In the old school treatment, as is well known, very many cases of gonorrhœa remain uncured, and in these cases it may be seen that a gonorrhœa cure does not consist in merely making the issue free of bacteria and in reducing it to a mere agglutination in the morning; but it requires a remodelling of the constitution, in order to cut off the soil of the poison, in which it otherwise continues to luxuriate with consequences extending beyond the domain of the urethra. I cannot come to believe that the permanent mental depression owing to the non-disappearance of the last drop could of itself be the cause for all the bodily malaise to which such persons are subject. The symptoms are far too severe to be put off with the mere explanation : Through the long duration of your illness you have become a neurasthenic. No, the whole state has been changed ! Formerly bright and merry, now melancholy and sad ; once upon a time strong and clear in his head, now dull and dizzy ; aforetimes unmindful of weather and storm, now chilly and shuddering at every draught ; before this trouble he was blessed with sound and quiet sleep, now there are twitches and jerks all night ; aforetimes he would not be tired out by a walk of several miles, now his legs are as heavy as lead ; he has colds ever and anon, pains and tearing, now here, now there, all over the body—such is the image of the much ill treated, chronic gonorrhœa patient abused with injections, bougies, catheters and massage of the prostate gland, and still remaining uncured. But to return to our case. After two weeks, no more gonococci could be seen in the secretion, the secretion soon ceasing altogether, and the patient would have supposed himself cured if an acutely lancinating sensation in a certain part of the urethra had not always warned him that there was a place which was not yet all right. There was no question of any stricture, but the sensation of a stitch in that place could not be argued away, and the patient was in no way inclined to be a hypochondriac. So I prescribed for him *Acid nitric.* 10·0., three drops every morning and evening in a teaspoonful of water. After the fourth day there was no more stinging.

II. Mr. K. was taken with syphilis five years ago, went through three ointment cures, and believed that he was cured although here and there a little pustule could yet be seen; and he was betrothed and married—the result showed up in the form of a little child, incapable of continuing in life, loaded down with all the signs of congenital syphilis. Besides the eruption and the typical ozæna, it showed an enormous swelling of the liver, a sure sign of hereditary lues. The child then died, for in such cases we may do what we will and ought, in fact, to do nothing at all—and the father, otherwise a very honorable and efficient man, underwent a thorough treatment, *Kali iod.* and *Acid nitric.* in various potencies, frequent steam-baths and light baths, a predominantly vegetarian diet were used for half a year, still every now and then small, rancid spots appeared on the hairy scalp, until finally *Mercurius iod ruber*, in the third trituration, taken morning and evening, as much as would lie on the point of a knife, well loaded up, cleaned him out thoroughly in about a week; and then he remained clean. The remedy was continued with longer intervals for some time and I am convinced that a second child, if it should come, will no more call to mind the wretched fate that overtook the father in a weak hour.

MENSTRUAL TROUBLES.

III. Miss B., from Miltenberg on the Main, applied to me by letter, on the recommendation of a lady I had cured, with the request that I would send her medicine against the excessive troubles she had at every menstruation. The cramps and pains appeared in the first two days often with such violence that she at times swooned, and was only relieved by the warmth of the bed, hot clothes and hot bed-pans. She is in general somewhat nervous and easily excited, also pretty anæmic. She had taken a sufficiency of iron, as her teeth and stomach could testify. She was doubly distressed by her condition, as she is now a bridge, and was afraid that she would be unable to perform the duties of a household and of married life. I wrote her an encouraging letter, stating that this very trouble was frequently relieved through marriage, but that her chlorosis ought to be first removed. I prescribed a definite diet, lukewarm sitz-baths, much use of milk and cream, abstention from coffee and tea, and as medicine I prescribed ***Magnesia phosph.*** in the 6. trituration, alternating with *Cuprum acet.* also in the 6. trituration. The remedies were ordered to be taken in alternate weeks After the lapse of some time I received the report that the menstruation now proceeded with moderate symptoms ; though she was inclined to attribute this to the reason that her anæmia had entirely disappeared in consequence of the sitz-baths and the copious use of milk. The patient will probably never understand the brilliant effects of *Cuprum aceticum* in the treatment of cases of chlorosis, where iron refuses to act, or has been used to excess and to the injury of the patient.—The *Homœopathic Recorder*, February 15, 1908.

MENTAL ALIENATION CURED BY ZINCUM.

By B. Assem, Prior.

A short time ago a female came to me requesting my aid for her mother, who was sick and who had herself eight years before frequently consulted me on account of the sickness of this her daughter who is now standing before me. At that time I had recorded the following data : "August 30, 1889, A. M., twenty-five years of age, the daughter of a farmer ; about a year before this time a well-known married man had made her an immoral proposition and sought to overpower her, but he could not effect his purpose. Nevertheless, she was so much excited and outraged thereby that from that time on she had not been normal. Her mother says that she is distracted in mind, gives no answer to questions, does not want to work, is unable to sleep, and walks up and down in the room for half the night ; at times she sobs and falls into weeping spasms, and seems to be absent-minded ; she will lie on the floor instead of going to bed ; is unwilling to eat ; people call her crazy. The worst symptom is her constant anxiety and restlessness, which drives herself and those around her almost to distraction. This has gone on for a year. Also medicines have been tried, as also kindly and earnest admonitions, but all in vain. Owing to the great expense she has not yet been taken to an insane asylum, but this will eventually have to be done."

For this case of restlessness the remedy recommended by Farrington, *Zincum valerianicum*, seemed to me to be indicated. This remedy I gave to the mother for the patient, and I was not mistaken, for in quite a short time the mental equilibrium of the patient was restored and to this day, eight years afterwards, she has not had any relapse. She has regained her cheerfulness and industry, but is not disposed to recall her experience. I received no further information as to her mother, on whose account she came to see me.—The *Homœopathic Recorder*, February 15, 1908.

A RHUS RADICANS CASE.

By W. H. Freeman, M. D., Brooklyn, N. Y.

Dec. 30, 1907. Mr. L. D., age 21. Ailing since a bad cold contracted five weeks ago.

Pain left chest, knife-like, extending to the right < when coughing and in the day-time; > from exertion and from taking a deep breath.

Muscular soreness in left chest, shoulder and down left arm, > while exercising.

Dry tickling cough for five weeks, < on changing from warm to cold air and in the day time, > from hot room and in the open air.

Catarrh with nasal obstruction for several years.

Constipated for about three years; inactivity of the bowels—no inclination or stool except after taking some cathartic, principally Cascara, Epsom salts, vegetable pills (?) or Garfield tea.

Coffee three times a day.

Chills from hips downward today.

Appendical pain and tenderness for three years.

Urine reddish, turbid, strong smelling, burns on passing.

Desire for and relief in cold open air; < in wet weather, during rest and when unoccupied.

Restlessness, > from motion, violent exertion and on getting warmed up.

Last September, had eczema (?) lasting six weeks.

Eruption entire head and face, arms and hands; moist, purulent, scabby, itching and burning. Cured after about one month's treatment with lotions, ointments, etc.

Rhus poisoning on several occasions as a boy. Never had any venereal disease.

Rhus radicans 200 (B. & T.) four powders, one every six hours and follow with placebo.

Jan. 3, 1908. Patient says he felt much better within twelve hours. The pains were quickly > and the bowels have moved daily since taking the medicine, and urine more natural. The cough is about the same but does not bother him greatly. No more chills and only slight pain occasionally in region of appendix.

Cases like this with a mixture of chronic and acute symptoms and a history of suppressed eruptions, Rhus poisoning, abuse of coffee and drugs, are always more or less confusing and difficult to prescribe for. Only by grouping the symptoms according to their etiology and time of existence can we arrive at a proper understanding and able to select the right remedy with which to begin the treatment.

The remedy given was selected because of its similarity to the "generals" of the patient and because it covered his most recent and most troublesome symptoms. It did not seem to fit the cough which is also recent (five weeks) but not as recent or troublesome as the muscular symptoms. The cough is possibly an acute extension of the nasal catarrh and probably deserved to be considered and treated as a distinct entity. The proper thing to do is to continue the patient on placebo as long as he improves, and if necessary give more Rhus for return of Rhus symptoms or another drug for the cough or other symptoms remaining later on that are not removed by the Rhus.

The morbid influences with which patients become loaded up can only be unloaded from the top downward, one layer at a time, that is, the patient must get well or be cured in the reverse order to that in which he became sick.

Whether there is any difference between Rhus tox. and Rhus radicans is a disputed question. In his article on Rhus radicans (MEDICAL ADVANCE, p. 218, 1906), Dr. Allen claims there is and speaks of the variety radicans or climbing ivy as an antipsoric, and a valuable remedy after suppressed eruption—which is one reason for its selection in this case. Rhus radicans is very common in the woods of Long Island, and there is much of it near where the patient has lived since childhood.—The *Medical Advance*, February, 1908.

LACHESIS: COUGH.

A Vienna lady residing at Montreux, wrote that for ten years she had suffered from an obstinate cough upon which neither homœopathic or allopathic treatment nor sojourning at various baths had any effect. The following symptoms were given; the cough is aggravated when in society; as soon as she makes a mental effort; by emotion of any sort. Lachesis, 10 M, two doses in fifteen days sufficed to cure completely, and restored her vanished confidence in homœo-therapeusis.

A Geneva official asked advice for his wife, who was suffering from a nervous cough, aggravated in the morning on rising, and provoked by emotional disturbances, by laughing; she was forced to deprive herself of society; as soon as she began to talk or become excited, the cough commenced. She had been for a year under old school treatment without amelioration. Lachesis 30, 200, 10M in infrequent doses completely cured the cough in eight weeks.

The lachesis cough is spasmodic, dry, short, especially during the day. During the night the patient coughs without waking or being conscious of it. If there is a pronounced lesion, the left side is more often lain upon.—The *North American Journal of Homœopathy*, February, 1908.

COLOCYNTH: SCIATICA.

A widow, aged 51, had suffered for years from a severe right-sided sciatica. She had been treated in Berlin by a number of physicians and professors without any immediate or permanent result. She had come to this seaside resort to take the baths, and as the writer was treating a child in the same house he was called in for advice as she had heard that he was a homœopath, and as all else had failed, homœopathy might be tried. I found the woman sitting on a chair, and she verbosely related her afflictions, for which no direct causation could be found. It was noted during her story that the face was frequently distorted as from pain, and interrogation brought out the fact that the pains appeared suddenly, like lightning, and were particularly worse at night. Examination showed the sciatic condition, the limb, from lack of use, having become somewhat smaller. Her ordinary regimen was continued, and colocynth 3x, gtt 3 t.i.d. in a spoonful of water was prescribed. This worked promptly, being followed by the 4x twice daily, then the 5x once daily, latter twice weekly, then once a week. From the third day after my first visit, marked improvement began, which continued so that in fourteen days she was absolutely free of pain, feeling only with changes of weather a slight return now and then. In six weeks all her ailments had disappeared, and when seen a year later her health was perfect.—The *North American Journal of Homœopathy,* February, 1908.

Gleanings from Contemporary Literature.

ENVIRONMENT AND DISEASE.

BY JOHN B. HUBER, A.M., M.D.,
Visiting Physician to St. Joseph's Hospital for Consumptives, etc.

There are three main factors which make up the life of the average individual—his heredity, his environment and his will. Sometimes the last of these will do much to rid one of the effects of an unfortunate heredity; and we constantly see how a good stout will makes one the master of a very unfortunate environment. In this paper I am concerned with unwholesome conditions of living external to the human organism; and shall consider how disease results when they are not overcome or successfully coped with.

It was Herbert Spencer who defined life as the constant adjustment of internal relations to external relations. This is a very incomplete definition; life is a great deal more than is here implied. Nevertheless it is adequate for the purpose of this paper; it expresses how absolutely dependent the individual is upon external conditions. From the moment of conception the organism which is afterward to become the sentient creature is constantly being influenced from without. Even in the womb, during the embryonic period, while the cells are becoming differentiated and the organs are undergoing formation, and during foetal life, when the organs increase in size and begin to take on their several functions, the future being is most acutely influenced by environmental conditions—gravity, the purity of the mother's blood, its oxygen content, its chemical constitution, uterine and placental diseases, diathetic affections, the results of an aberrant maternal nervous system. When such influences are abnormal the tissues of the foetus must surely suffer.

There may be arrested development, excess of development of some parts or a perversion in the formation of an organ. Maternal metabolic poisons acting on the embryo may effect its tisues so abnormally that in post-natal life the power of resistance to disease is greatly lowered. Infections and intoxications in the mother may be transferred to her child; children born with tuberculosis, syphilis or pyogenic foci are nearly all cases of transmission from an ante-natal environment.

Upon being born the organism comes most intimately in relation with its environment. Every human tissue, however minute, is but a rearrangement of elements which enter the body from without, through the air or with the food and drink—hydrogen, oxygen, carbon, nitrogen and the like. There is nothing in the body which is not to be found in the body's environment, which has not been abstracted from nature outside it. Therefore a man will be very much indeed what his environment makes him. And this is so with every aspect of being. The things we eat, the air we breathe, the sunshine and the flowers about us, all external phenomena, generally affect the senses benignantly; and the usual reaction to these stimuli from without tends to the condition which is termed health.

However, an individual seldom finds himself in an environment to which he is perfectly adapted; indeed, such an environment is hardly desirable. For struggle fills up life so largely, brawn and good digestion are so much the result of an output of strength, and happiness so often comes about because of difficulties overcome. The best environment, the one most conducive to health is one not wholly free from struggle, but rather one in which the individual may be victorious in his conflicts, and when the victories are not achieved at too great a price. When the stresses and strains of life are greater than the organism can bear disease of one kind or another sooner or later supervenes.

The external influences which can act upon man are now considered, in the last analysis to be either chemical or physical in their reactions; this is so as regards air, light, electricity, the food-stuffs which are ingested, temperature changes and the like. The external agencies which act through the sense-organs—the ether waves that affect the retina, the air vibrations that set in motion the aural apparatus, the chemical substances that act upon the olfactory and gustatory mucous membranes, the mechanical agencies which excite the motor and sensory impulses, all belong to the same category. It is even held now-a-days, and quite truly, that in conscious life memories are called forth and association processes are stimulated into activity by physical or chemical influences from without upon our sense organs. One's environment, therefore, may influence not only the tangible body, but may also induce an abnormal psychism, indeed we now agree that we cannot look upon the mind and body as separate entities, as things which may be considered apart. A baneful influence from without may permeate every phase of existence, and may bring about disease, mental as well as physical.

Environmental factors which may be inimical to life are as numerous as are external phenomena; even to enumerate them would take up a good sized paper. I purpose here to discuss only adverse atmospheric conditions—climatic, seasonal, rarified air, humidity, dust, infection by insects and the bacterial content of atmospheres.

When we have exhausted every therapeutic means at our disposal and the patient's condition still persists in being intractable, we advise a a change of climate, which is in reality a change of environment. And where the disease is not hopelessly chronic the result is most salutary. A bronchitis which no drug has affected, an obstinate insomnia, a weak heart after diphtheria or grippe are remedied after a day or two of climatic change. It does not generally matter what climate is selected so long as it is different (though not radically different) from the one in which the patient has been living. Still there are some important considerations. Variable and very moist climates had, as a rule, best be avoided. Tuberculosis occur more or less in all localities; but it seems to prevail inversely as the altitude progresses above sea-level. A rare atmosphere strengthens pulmonary respiration by requiring greater effort in breathing. Long-continued heat predisposes by depressing the vital powers. The more isolated and less densely populated a region, the less likelihood there is of infection. Climates are modified, in general favorably, by trees, rocks, rivers, lakes, drainage, winds, the proportion of sunshiny days, and the like. Vegetation has an important regulative effect, modifying the winds, equalizing the temperature and diminishing the dust. Animal life depends upon the free oxygen in the air. Pure air is essential to normal metabolism, the conversion of oxygen, food-stuffs and the fluids ingested into healthy tissues. Imperfect oxygenation in the tissues results in well-known degenerative changes and increases susceptibility to infection.

Atmospheric humidity is related to animal perspiration. At a low temperature the sweat evaporates as rapidly as it transudes through the skin; it is thus insensible perspiration. As the humidity increases sweat may transpire, but its evaporation is progressively delayed until, when the humidity reaches the saturation point, the skin remains constantly wet. This reduction in evaporation diminishes the natural heat dissipation, so that with a high relative humidity, low or high degrees of temperature are poorly borne. Great humidity, by interfering with normal heat regulation of the body, may indirectly favor the "catching of cold," and by devitalizing the tissues, favor the development of infectious processes. Sickness is in general more prevalent in variable seasons. There is more illness in March, when the weather is uncertain, than in January, when the temperature is more uniform. Consumptives, by the way, do better in the winter months than in the summer. Marine climates, though ideally bacteria free, are apt to increase coughs.

The danger to health of atmosperic impurities is now becoming pretty well recognized. It is by this means—by inhalation—that tuberculous infection oftentimes converts merely strumous glands into true tuberculosis. Rheumatism, tonsilitis, diphtheria and many other diseases are due to germinal infection from the atmosphere. How pathogenic a dirty atmosphere may be is impressed upon anyone who has seen the series of plates which Dr. Woodury had exposed when he was Metropolitan Street Cleaning Commissioner. Of two such plates one would represent atmospheric conditions in densely crowded neighborhoods, where the sanitary conditions were comparatively poor. And such a plate would presently, after exposure, teem with bacteria, moulds, fungi and every kind of impurity deleterious to human health. Its companion plate exposed in a cleanly and salubrious district under precisely similar conditions, would be almost wholly free of impurities. Miguel in a very valuable table, shows how at sea there are 0.6 bacteria found in a cubic metre of air; at an altitude of 2,000 metres, 3; at the summit of the Pantheon, 200 bacteira; in a Parisian street, 3,480; in a new house, 4,500; in the air of Parisian sewers, 6,000; in an old house, 36,000; in the Hotel-Dieu (Hospital), 40,000; and in thePitie Hospital, 79,000 bacteria to the cubic metre of air.

The subject of atmospheric impurities is beginning to take on an interest apart from purely medical practice ; the Merchants' Association in New York City, for instance, has in quite a large and wholesome spirit taken up the matter and has engaged Dr. D. D. Jackson (B.C.) to prepare a report for the information of the public. Dr. Jackson's studies tend quite to the same conclusions as Soper, Harlow, Brooks, Flick and many others have reached. The subject is indeed a vital one, especially to urban communities ; and we may be sure it will be much agitated for several years to come.

Even if dust does not contain bacteria it may be so gritty or so large in amount as to irritate quite seriously the mucous membranes of the eye, the nose, the throat, the Eustachian tubes, the bronchi and the lungs, thus making them an ideal soil for germ implantation. If the respective bacteria be present in the dust one is indeed fortunate, or peculiarly disease-resistant, who does not contract conjunctivitis, catarrh, middle ear disease, tonsilitis, quinzy, laryngitis, bronchitis, pneumonia, influenza, tuberculosis, or rheumatism.

Winds also have to do with disease propagation. Wind storms are found to be followed by epidemics of acute "colds" and catarrhs, wherein many who were previously in very good health have become affected. And thus oftentimes have resulted cases of chronic catarrh and diseases contracted by inhalation. Of course most of those who contract diseases have been predisposed by one or several among multitudinous predisposing factors ; otherwise illness would be much more prevalent and death rates would be enormous. Jackson has found that most of the sickness and death due to throat and lung affections occur during those months when high winds are prevalent ; on the average most deaths from influenza, bronchitis, tuberculosis and pneumonia occur between December and April. And the enormous death-rate from these diseases would no doubt be much decreased were the quantity or the virulence of dust in city streets reduced.

One must have a strong stomach to review with equanimity the result of Jackson's examination of city dust. He has found in it plaster, iron rust, stone-dust, cement from building operations, dirt from excavations or from loosely constructed carts, ashes, house-sweepings and dried garbage blown from barrels and cans, chimney-soot and cinder from industrial plants, excrement of horses, dogs and other animals, dried sputum of the tuberculous and those having bronchitis, naso-pharyngeal catarrh or pneumonia in its first stages. If the material last mentioned is concealed beneath other accumulations or does not happen to be exposed to direct sunlight for some time, the bacteria are not destroyed and the disease may be contracted by inhalation. Cloudy and windy days, such as are frequent in December and March are most productive of germ disease, in the lower animals as well as in man. When the wind is blowing eighteen miles in an hour there are five times as many bacteria in the air as when it is blowing nine miles per hour. Bacteria are thus often blown upon raw foods exposed for sale. New York City dust contains half a million bacteria per grain (15 grains); and Soper computes that the average citizen will inhale in a day 16·5 mg. of dust, containing 8·250 bacteria. Any city could certainly spend money to no better advantage, therefore, than by sprinkling and then thoroughly sweeping its streets removing the material gathered up and then thoroughly flushing the thoroughfares.

The smoke nuisance is deleterious to the communal health. Infection conveyed by insects is by no means rare. The part played by the mosquito with regard to typhoid fever and malaria are now well recognized. It is only recently, however, that we have come to consider the house fly dangerous. And this the pest certainly is. It is one of the chief sources of infection and in New York City it causes annually about 650 deaths from typhoid fever, and about 7,000 deaths from diarrhœa. It is our habit to consider the fall rise in typhoid fever as an established institution; however, if this fall rise is set back two months from the report of deaths to the time when the disease is contracted, it will correspond exactly to the curve of prevalence of flies and to the curve of rise in deaths from diarrhœal diseases of both children and adults. It also corresponds to the temperature curve; it is, therefore, erroneous to attribute these diseases to hot weather alone. Climatic conditions may predispose by reducing the vitality but they are not the essential cause; temperature does not produce the specific germ—the causal agent—which invariably accompanies the disease. The activity of the house-fly, states Jackson, is in proportion to the temperature, and the times when this insect is most active and most numerous corresponds exactly with the time of contraction of diarrhœa and of typhoid fever.

Infantile diarrhoea and the dysenteries prevail throughout civilization in hot weather; these diseases are of germ origin. The immunity from diarrhoea of breast-fed babies and the frequency of its occurrence among artificially-fed infants point conclusively to germ transmission in food and air. Several epidemics of a malignant type of dysentery have radiated from a single point and have disappeared completely when proper disinfection of closets was enforced. Flies generally go but a few rods from their breeding places except in warm and sultry weather, when they extend their travels by day and flock indoors at night. Food and filth attract them equally. Jackson states that he captured along the New York river front a fly which was carrying in its mouth and on its legs 1000,000 fecal bacteria. "He had been behind the large packing-boxes down by the wharf and was on his way to the nearest milk-pitcher."

I submit that we, as practitioners of medicine, do not adequately appreciate the etiological factors which are inherent in environment. They should, in every case, be inquired into as a part of the amanuensis. And we should, I believe, make one visit at least whenever it is feasible at the homes of patients who call upon us having only the expectation of office treatment in view.—*The Medical Times*, March, 1908.

CAPITAL PUNISHMENT OF MENTALLY DEFECTIVE MURDERERS.

Our attention is almost daily called to the problem of disposition of murderers, who show more or less plainly mental defects. In practically every case of homicide in which self-defence, absolute lack of intent to kill or other obvious excuse or justification is not manifest, the plea of insanity is either made or seriously contemplated by the defence. Neurology has also, within the last few years, recognized many phases of mental perturbation and deficiency, not generally recognized as constituting insanity. Thus, self-interest, on the part of the slayer and his family, abstruse scientific conculsions and humanity have united to emphasize the importance of mental aberration in regard to the subsequent dealings of the State with the slayer.

Our caption is faulty in two respects; first, we believe that the legal killing of those who have killed their fellows should not primarily be regarded as punishment; secondly, the term *murderer* is not technically applicable to one who kills without intention, or full realization of the nature of the act.

Why do we put to death or sentence to life imprisonment those who have killed other men? Unquestionably, up to less than a century ago, the proper answer would have been to avenge a wrong. Indeed, even the word *revenge* might have been applicable. Unquestionably, too, there is a survival of this attitude in a large part of the community. According to this sentiment, the death penalty or that of life imprisonment may rightly be considered a punishment.

A broader spirited view of legal punishment of crime brings into prominence two other factors—reformation of the criminal and determent of potential criminals through fear of consequences. These two factors are, however, less conspicuous in regard to manslaughter than in regard to any other crime. In the first place, popular sentiment always has and probably always will demand either actual death or the living death of permanent imprisonment for murderers as the term is commonly and not very accurately employed. Such punishment obviously renders reformation, except in the moral and religious sense as applied to one permanently removed from human society, out of the question. Again, in a large proportion of homicides, especially those to which the term murder is strictly applicable, the ultimate reason leading to the killing is so personal and so obsessive, that no penalty will deter anyone contemplating murder nor, on the other hand, will the lack of penalty predispose to crime.

Criminal acts in general may be classified as impersonal and personal. Those against property are, as a rule impersonal, at least when perpetrated for the immediate interests of the criminal. Very occasionally theft, burglary, etc., are committed as acts of revenge, but damage to property from personal motives usually takes the form of arson or other wanton destruction. So too, perjury is usually committed in the immediate interest of the criminal and only rarely with the object of getting a particular individual into trouble. On the other hand, killing, assault, etc., is peculiarly frequent as an expression of personal hatred although we must also recognize such acts as dependent upon mental perversion—when they are rather apt to be associated with sexual perversion—in which an inexplicable pleasure is had in injury and death without regard to individuality of the victim; and as dependent upon other forms of criminality, usually dishonest acquisition of property. In the last group of cases, we must further distinguish the burglar, highwayman, etc., who kills merely incidentally, perhaps very reluctantly or even unintentionally, the one who combines dishonesty with cruelty and the one who happens to be actuated by personal malice.

Now, viewing the matter impartially, without either bitterness or sympathetic weakness, it seems to us that the sole excuse and justification of the death penalty is to remove permanently from human society an excessively dangerous member. Life imprisonment meets the same end but less certainly and less economically. On the other hand, the abolition of capital punishment marks a general elevation of the moral and religious tone of the community though we would not go so far as to advocate it.

To avoid confusion, let us eliminate all cases of manslaughter which are commonly recognized as justifiable—for instance self-defence either against actual assault or in dealing with burglars, etc.—or entirely unintentional and not due to criminal carelessness, or committed by persons at the time recognized as insane, non compos mentis—as in the case of young children who kill their companions in sport and without any realization of the nature of what they are doing, etc.

The remaining cases include a large group in which there is no reasonable danger of the repetition of the act further than that, having once usurped the functions of the judiciary, the perpetrator of the crime may rightly be considered liable to repeat the offence in the future. In many such instances, aside from the unwisdom of allowing any individual to usurp the prerogative of the whole people, public sentiment upholds him and regards his act as definitely useful. In many other instances, embarrassment is avoided by the immediate suicide of the slayer.

In a second large group, the slayer is a professional criminal, a menace and expense to the community even if he kills no one and there is no question that he should be put out of the way.

In a third group, to which we allude particularly, careful review of the case in retrospect, shows more or less mental warping of the slayer. For instance, Dr. S. Grover Burnet in the Medical Fortnightly of December 25, 1907, studies the histories of three criminal epileptics who have taken eleven lives. There has also recently occurred the second trial of Thaw, the defence concentrating their efforts on the plea of insanity, although apparently, no one had ever thought of him as insane prior to his killing of White.

At the risk of seeming brutal, we would advocate that, for this entire group of cases, the only safe rule is to regard capital punishment or its substitute, life imprisonment, not as punishment in any true sense of the word, but as a means of ridding society of dangerous members. From this standpoint it makes little difference whether we can make out a distinct mental warping or not. From the practical standpoint such cases are of greater danger to society than the unquestionably sane murderer who, without previous criminality and with deliberate purpose takes the law into his own hands and kills some individual against whom he has a bitter grudge. They are of even greater potential danger than the criminal who kills in the pursuit of burglary or highway robbery. The latter may be rendered honest by reformatory methods or the natural process of maturity, and if reformed so far as honesty is concerned he is not likely to commit murder again.

The great danger in the insanity plea with regard to murderers is that they will be discharged from custody as insane, while retaining the characteristics which have led them to commit the first murder. Even in custody in proper asylums, they remain a source of danger to companions and custodians. Moreover, to take a particular instance, there is no reasonable question but that the acquittal of Thaw was on account of his financial resources, whereas, exactly the same circumstances repeated in low life would already have led to a conviction. Generally speaking it is exceedingly difficult, even impossible, to distinguish sharply between mere folly and lunacy, between a bad temper and a moral idiocy, between the immediate effects of alcohol and its permanent effect on the brain. Strictly speaking, it is illogical and unethical to hold a man accountable for criminal acts perpetrated while he is drunk. Men have been hanged for murders committed under the influence of alcohol, although they could not even remember the deed. Yet, as a matter of practical utility it seems impossible to consider drunkenness as an excuse for crime.

As an academic proposition, it is fairly questionable whether a person who is mentally normal can never kill either himself or others, yet, in the crude practical sense, we must recognize sane suicides and murderers. In many instances the question of insanity is not raised by the defence simply because the murderer does not wish to save his life or because there is no one to take sufficient interest in his defence.

There are obvious ethical difficulties in the way of allowing a state of affairs which will necessarily let wealth or influence play an important part on the disposition of criminals. It is equally unethical to allow the choice between capital punishment and imprisonment to rest in any sense with the murderer. If, on the other hand, capital punishment is abandoned, it is only a matter of a comparatively short time when we shall have undergoing life imprisonment hundreds of persons, perfectly sane, perfectly well disposed, virtually different in every way from the men condemned for murder—just as different, for example, as you and we are at our maturity or in our senility from the immature cubs we once were. What shall be done with these persons? It will be unjust to keep them in captivity. It will be sociologically uneconomic, for many murderers are men of ability and excellent qualities. If the pardoning power is exercised, we shall have the same play of financial and personal influence as in the original trial; we shall have under the present rule of gubernatorial discretion, displays of individual temperament varying from cold-bloodedness to maudlin sympathy. Mistakes will be made which will turn loose on the community crafty criminals who have nursed their vengeance for years and have covered it with a cloak of hypocrisy, or mental defectives who have shown apparent recovery under the routine of confinement.

We can see no simple and satisfactory way out of the dilemma but strongly incline to the idea that, in the absence of ample justification, capital punishment, not as a matter of vengeance, but as a safeguard to society, is the best method of dealing with the slayer of man, without regard to impracticable refinements of neurology.—*Medical Times*, March, 1908.

A FRAGMENTARY PROVING OF PAPAYA VULGARIS.

By W. H. Leonard, M. D. (deceased), Minneapolis, Minn.

(As near as I can learn this Papaya vulgaris is the Carica papaya, or West Indian Paw-paw, from which "Papoid" is prepared—W. E. L.)

Notes (of the daily proving, transcribed from his own hand-writing).

Proving of Papaya vulgaris on myself, W. H. L., age 54 years. In good health usually ; secretions natural, except scanty urine, two thirds the normal amount ; bowels inclined to constipation, yet having a stool each day ; disturbed sleep when lying on left side ; smoke two cigars daily, one each after dinner and supper.

Nov. 30, 1880, evening, took 25 drops of 6x dilution of P.

Dec. 1. No symptoms. Took 5 drops at 7-30 a. m. and on retiring at 10 p. m.

Dec. 2. No symptoms. Took 5 drops at 12 noon and at 10 p. m.

Dec. 3. Repeat dose at 7-30 a. m. and 12 noon. Feel dull on rising, dull pain in head, stretchy (probably owing to weather, for I have this feeling frequently in this cloudy weather).

Costive stool in morning, loose stool at night (unusual).

Dose at 10-30 p. m. on retiring. Wake in the night with headache.

Dec. 4. Feel dull in the morning on rising, headache gone.

Dose repeated at 7-30 a. m., 1 p. m. and 10 p. m. Loose stool this morning. No other symptoms.

Dec. 5. A restless night; dull headache over left eye extending back to occiput; eructations, tasteless, especially after medicine; head feels better after 3 p. m.; appetite as usual, good. Took no medicine today.

Dec. 6. 7th day. Wake up with headache which continues till 9 a. m., passes while riding to visit patients natural stool this a. m. No medicine to-day.

Dec. 7. 8th day. No headache, though up part of the night; some nasal catarrh; hoarseness after 4 p. m. Took 5 drops at bed time. Disposed to stool but refrain till morning.

Dec. 8. 9th day. Had vivid dreams through the night, as I have had each night after taking the medicine. Notice that the urine is more profuse since taking P. Very hoarse through the day (probably from a cold), pain in larynx; otherwise feel well as usual.

Soreness and some pain in molars on left lower maxilla (quite unusual). Took five drops at bed time.

Dec. 9. 10th day. Took no medicine. Cold a little loose; hoarseness about the same, but no pain in the larynx; natural stool; urine increased.

Dec. 10. 11th day. No medicine. Itching behind right ear. Stool at 1 p. m., also loose stool in evening; urine not so profuse. Dryness of the throat at bed time, with some cough keeping awake till after 11.

Dec. 11. 12th day. No medicine. Cold and hoarseness much better.

Dec. 12. 13th day. Commenced again with 5 drops morning, noon and bed time. No symptoms except toothache, not as severe as before. Costive stool in evening.

Dec. 13. 14th day. Took the three doses as yesterday. Loose stool morning. No other symptoms.

Dec. 14. 15th day. Took four doses to-day. Toothache of left molars, as before. Itching just above the mons veneris for two days, an itching, irritable wheal like a nettle rash; itching on different parts of the body.

Dec. 15. 16th day. Took three doses to day. Toothache continues.

Dec. 16 17th day. Took four doses to-day. More itching of skin over different parts of body.

Dec. 17. 18th day. Dose morning and evening Toothache on left side. Still some itching of skin.

Dec. 18. 19th day. Took no medicine. Stool a.m., another loose one p.m. More wheals over pubes; itching of skin continues.

Dec. 19. 20th day. On rising in the morning tension in bladder, with desire to urinate (unusual); again at noon, also in the evening. Rheumatism in left shoulder. No medicine.

Dec. 20. 21st day. Toothache continues much of the time. Itching of right ankle on going to bed, this the third night. Costive stool after dinner (midday). Rheumatism of shoulder. No medicine.

Dec. 21. 22nd day. Costive stool after dinner. Rheumatism of shoulder continues, not as severe. Toothache after meals. No medicine.

Dec. 22. 23rd day. Costive. Itching behind left ear. No medicine.

Dec. 23. 24th day. Dentist found decay in aching tooth, the treatment of which mostly relieved the pain. Deltoid of left arm still painful, but better. No medicine.

Dec. 29. 30th day. Still much itching of skin in different parts of the body, especially behind the left ear. Soreness of second toe of left foot, as if corn existed—there has been none for years ; symptom present since last record, but growing less. Not as much urine as when first taking P., no stool to-day. No medicine.

Dec. 30. 31st day. Took 4 doses (5 drops) of 6x two hours apart. After second dose, sensation of chilliness. Easy stool at noon—none for twenty-four hours. More itching behind left ear. Toothache much increased in filled tooth. Fulness of head in evening. I have noticed at different times after taking P., greater activity, can read or study longer without being tired.

Dec. 31. 32nd day. Three doses to-day. Pain and swelling on ball of right foot, under little toe.

Jan. 2, 1881. 34th day. After taking one dose (5 drops) of 1x. felt a pain in the night through the pubic region, More pain in right foot involving ball and two small toes, with burning heat (feet have not been exposed to cold). More itching of skin. Take 5 drops of 1x at bed time.

Jan. 3. 35th day. Passed a wakeful night, first sleep dreamy. Took 5 drops on rising. Before breakfast while reading, fore-finger of each hand felt cold and dead ; it took some time to get the blood to circulating by whipping and wringing ; right one worse. Evening, after four doses (5 drops): much thirst, desire cold water but it produces so much pain in decayed (painful) tooth that I cannot take it. Two stools to-day.

Jan. 4. 36th day. Have slept well, rising at seven a.m., (although feel like sleeping another hour). Dull headache and much thirst. Take no P. to-day. Evening—headache better ; still some thirst. Itching over skin continues, especially at wrists. Urine continues more profuse.

Jan. 6. 38th day. Felt pain in left testicle in the night ; wakened by it and kept awake some time—nothing similar for years ; when it occurred after taking Podophyllum 200. Itching behind ears continues ; no eruption. No medicine since Jan. 3rd.

Jan. 13. 43rd day. Have noticed no marked symptoms in this interim, except some itching of the skin ; urine, as formerly, rather scanty. This morning an eruption over the right eyebrow with feeling as if there were some foreign substance in the right eye ; had it examined, nothing noted except inflammation of the lids ; the worst of the feeling passed away with the examination. The eyes were examined at the same time for glasses ; marked for No. 14, which proved a good fit ; I had worn No. 11 for one year ; but they were getting tiresome.

Jan. 19. 49th day. Commenced again on 6x. taking a dose every two hours through the day. Eruption on right forehead nearly all gone. Urination as it has been for months past, rather scanty. Have noticed more itching of skin, especially about the head. No appetite for supper; much thirst in the evening, had to drink water which I seldom do.

Feb. 26. 87th day. Have taken no P., since Jan. 19th. The eruption over the right eye has continued since its first appearance (43rd day). The irritation of the eyelids also continued so that I have been unable to do much reading or study by artificial light—my reason for stopping the proving. The scalp has itching, but less dandruff than usual—which latter I have been much troubled with for years. Stools have been more regular and loose. Urine continues more free. A sick headache returns which troubled me more or less ten years ago. Have taken no medication whatever to antidote or relieve symptoms. The P. has evidently awakened an old "psoric taint", caused by the suppression of an itch forty years ago.

(My father gradually recovered his usual vigorous health after this experiment, W. E. L.)—The *Medical Advance*, February, 1908.

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SERUM OF EEL.

Eel is a kind of European fish, of the family of Anguillidæ. The following note is taken from an authority :

"The term fixed for any one of three British species of Anguilla, once confounded together, but separated by Yarrell—the Sharp-nosed eel (Anguilla acutirostris); the Broad-nosed eel (A. latirostris) and the Snig eel (A. medirostris). All these are popularly called simply 'the eel'. The first is the more common species. It inhabits streams, lakes, etc. In autumn it descends to brackish water, where it spawns. In spring it returns in numbers numberless, all moving in ranks like soldiers in an army. The second species is somewhat less common. Couch in his Hist. Fishes Brit. Islands (1877), doubts if the Snig is a distinct species. He adds a new one, the Dublin eel (A. hibernica), and suspects there is another, the Grigg eel, which is perhaps A. Platbeck of Cuvier."

With regard to Serum of Eel as a medicine, we derive our information from *Revue Homœopathique Francaise*. At a meeting of the Societe Francaise d'Homœopathie, Dr. P. Jousset said : It is a new medicament, and he believed to be the first and the only one who has employed it in the treatment of the affection of the heart and kidney.

Mosso and Phisalix have experimented the serum of eel upon animals long before him. Because, they have demonstrated the great analogy of serum of eel with the venom of viper, that he was carried to study the medicament.

The experiments, that he has made at the laboratory of the Hospital Saint Jacques, are found related in the July number of L'Art Medical 1899; and more completely with regard to the histological lesions in Bulletin de la Societe Anatomique of May 1899.

The serum of eel acts very powerfully on rabbit. On injecting a dose of 3 drops, (hearing the physiological action of serum) in the marginal vein of the ear, on the following day the urine became albuminous and sanguinolent; the pulse afterwards abated in velocity to afford relief; by larger doses, 8 to 10 drops, it became intermittent. The urine at first became abundant and always albuminous. Afterwards the urine diminished, since anuria and diarrhœa came on almost at the same time, and the rabbit succumbed.

The lesions were especially intense in the liver and in the kidney; they disclosed two principles; the coagulation due to necrosis and vascular degeneration.

The heart presented also certain lesions, although very little advanced; there were rare granulations upon a few muscular fibres and in the wall of isolated capillaries; a certain kind of degeneration of the muscular fibre; a collection of round cellules in the fibres with new multiplication; upon a longitudinal curve short constriction of fibres; and upon transversal cutting vaccuoles in a certain number of muscular fibres."

The following interesting case was also mentioned by Dr. Jousset.

Rheumatic endocarditis, Mitral insufficiency and Contraction of the mitral valve. Hyposystole. Cactus, Digitaline, Theobronine, Apis, Strophanthus, Vipera torva, Spigelia, Colchicum, Aconite, Serum of Eel.

Madam X——,aged twenty-eight years, was admitted into the Saint-Jacques Hospital on the 31st October, 1907.

She had two attacks of acute articular rheumatism. The first accession was ten years before, and she was in bed for two months. The large articulations were successively affected and they were red swollen and painful. Very slight bruit was audible in the heart.

Only two months before she was again attacked which lasted for three weeks, complicated with grave endocarditis, characterised by considerable dyspnœa, anxiety and palor of the face. At the time of her admission to the hospital rasping systolic and presystolic bruits were ascertained. The jugular veins were beating with force and the pulse was small and irregular. The liver was painful and congested.

On the 31st October, *Cactus* 1 dec., ten drops was prescribed; but in the evening signs of asystole manifested itself, the House Surgeon prescribed *Digitaline*, 1 in 1000, twenty drops. The next day the patient found relief from the dose of the medicine; he again prescribed thirty drops of the same preparation of *Digitaline* and urine which was only 300 grammes, became on the next day 1500.

On the 2nd and 3rd November, not finding her well *Theobromine* three doses of 50 centigrammes was administered. The next day she had no medicine. The urine came to 2500 grammes. On the 5th, *Apis* 6 dec. and *Ledum* 3 dec. were alternated. From this time the urine considerably diminished and came from 750 to 300 grammes. The troubles of asystole again appeared. *Strophanthus* (Mother), *Vipera Torva* 2 dec. trituration, *Calomel*, *Spigelia*, and *Theobromine* produced almost no effect. The patient being extremely oppressed was obliged to seek the assistance of the Assistant Surgeon; the pulse was small and arythmic (irregular).

On the 1st December, Dr. Jousset found the patient in the same state. *Digitaline* was again indicated by the state of the pulse and the urine; but as the medicine could only procure a passing amelioration, he prescribed *Serum* of *Eel* 1 dec. ten drops, although the urine did not contain albumen. The next day the urine was double the volume and the day after it became 1100 grammes; at the same time the functional derangements were much ameliorated.

On the 9th December, the patient felt a little oppression, though slept well; the urine became 1500 grammes; the pulse was regular, but the bruit persisted with the same intensity. He prescribed *Colchicum* (Mother), forty drops for four days. The medicine could not produce any effect. Then he prescribed *Aconite* (1 dec. trituration) 20 deci-grammes in 200 grammes of water. The patient was better, she could notably walk without oppression. On the 22nd, she wanted to go home.

Remarks by Dr. Jousset: Digitaline is a usual and classic medicine. Three symptoms formally indicate its use: the loss of power of the cardiac muscle revealed by the small and intermittent pulse, oliguria and anasarca. In the aforesaid case two symptoms were present—the feeble and intermittent pulse and oliguria. The action of the medicine was immediate and from 800 grammes the urine increased to 1,500 in forty-eight hours.

Crystalised Digitaline in the dose of 30 to 50 drops in solution in the proportion of 1 in 1,000 given twice during the day, advantageously replaced the maceration of the leaves which is given otherwise. Its action is surer and more rapid, and its administration is more easy. Usually at the end of forty-eight hours urine increases and amelioration of the general symptoms comes on. He particularly drew attention to the favourable action of Digitaline when the medicament is administered in a sufficient dose of 30 to 50 drops in a day, being continued to 4, 6, 8 or 12 days; the untimely administration of other medicaments does not interfere with its action.

In another number of the same *Revue* he said that three or four drops of Serum of Eel injected in the marginal vein produce albuminuria and oliguria in a rabbit which died of anuria. At the autopsy, lesions of parenchymatous nephritis were found, the hepatic lesions were analogous to those of infectious maladies. The heart also was injured and principally from myocarditis.

Clinically, Serum of Eel has an efficacious action in troubles of the heart as mitral insufficiency, asystole with or without œdema, dyspnœa, and oliguria. Dr. P. Jousset generally prescribes ten drops of the first decimal. Diuresis is re-established. It has analogous action to that of Digitaline. Digitaline 3 dec. forty to fifty drops, three times, in asystole has more certain action than the serum; but when compensation has been re-established Serum of Eel is preferable; when Digitaline can not act, the serum will do so. Each of the substances has the following indication: Digitaline agrees with asystole, arterial hypotension, and anasarca. It re-establishes tension, increases the arterial tension, and indirectly provokes diuresis without touching the kidney.

Serum of Eel has a complex action upon the liver, kidney and heart. Clinically, it works when Digitalis has failed and lastly, maintains the compensation after Digitaline. It is indicated in asystole and other derangements of the heart and liver, and albuminuria. Dr. Paul Tessier prescribed Cratoegus (Mother) thirty drops in a case which produced diuresis.

Dr. Jousset thought that the reappearance of urine by that medicine was due to a substance called Propylamene experimented by Drs. Guibert and Nimiaz of Venice.

DYSENTERY.

(Continued from page 105).

COLLINSONIA CANADENSIS. *Stools Intermittent cutting in hypogastrium, compelling him to sit down and causing faintness, stool of yellow faecal matter, mucus and blood, with tenesmus, then cutting in hypogastrium.*

Small stool of mucus and blood, *preceded and followed by cutting in hypogastrium. Cutting in hypogastrium, with stool of bilious matter, mucus streaked with blood, and tenesmus, then intermittent cutting in hypogastrium.* General aggravation late at night. Pure mucus stools, or mucous stools mixed with dark substances. Dysenteric stools. Hæmorrhoidal dysentery with tenesmus.

Before stool. Cutting in hypogastrium. Faintness.

During Stool. Tenesmus.

After stool. Cutting in hypogastrium. Vomiting.

Rectum and Anus. Hæmorrhoids, bleeding almost incessantly especially with sensation of sharp sticks in rectum. Tenesmus.

Accompaniments. Nausea with cramp-like pains in stomach. Cutting pains in hypogastrium. Colic with flatulence and nausea. General aggravation late at night.

Kenearks. Collinsonia has the peculiar characteristic of cutting pain in the hypogastrium before and after stool. Faintness precedes the dysenteric flux. Though it is a rarely used medicine, yet it has its particular place in cases of dysentery.

COLOCYNTHIS. *Stools.* Frequent, mucous painless stool. Slimy then bilious at last bloody. Feculent at first, later almost of pure blood, with tenesmus and passage of pieces of mucus membrane. Dysentery with passage of blood, with burning pain in sacral region. Slimy diarrhœa. Sangnineous evacuations. Dysenterical evacuations, with colic. During evacuation, contraction in the rectum. Discharges slimy, bloody like scrapings of intestines. *Dysentery, bloody and mucous, stools always after eating or drinking, preceded by colic.* Aggravation after vexation or indignation. *Diarrhœa or dysentery as the result of anger or from fruit, with colic, the evacuation preceded by the characteristic colic of Colocynth, as an important indication.*

Before stool. Cutting colic. Great urging. *During stool.* Sometimes tenesmus at other times not. *After stool.* Relief of the pain. Prostration.

Rectum and Anus. Swollen hæmorrhoids. Urging to stool with sensation in anus and lower part of rectum as if weakened by repeated urging. Discharge of blood; daily with sticking and burning in small of the back and anus. Prolapsus. Tenesmus.

Accompaniments. Griping in epigastric region after every meal, worse towards evening. Pinching in pit preventing sleep, with constriction of stomach, and sensitiveness of stomach, so that it could bear no covering. Intermittent compression in epigastrium changing to pinching, with confusion of sinciput. Cramp in the stomach at night better from eructation. Distension and pain of abdomen (Mag. c.). Croaking as of frogs in abdomen. Rumbling in abdomen. Discharge of flatus. Pinching in abdomen as if bowels were pressed inward, better from pressure and bending inward, with cutting extending towards pubic region, so severe below navel that facial muscles were distorted and eyes drawn together, as if squeezed between stones. Griping; worse below navel obliging him to bend over. Griping worse after eating fruit. Colic of the most violent character worse from hard pressure, sometimes with nausea and vomiting, sometimes with diarrhœa or dysentery, sometimes with discharge of great quantities of gas; pains often extend into chest and pelvis, and may be caused by suppressed perspiration. as from drinking ice-water when heated, or it may be brought on by fits of anger; the patient always doubles up with the colic.

Remarks. Colocynth is applicable to cases of dysentery, where premonitory symptoms of violent cutting colic appear. In dysentery with cutting colic preceding stool, wants the help of Colocynth. In fact, it is a medicine which can be administered in the first stage of the disease. In a later stage it does not act so well or not at all.

Copaiva. *Stools.* Thin, frequent, without pain or urging, with increased mucus. *Dysentery with intolerable burning at anus, tonesmus and blood.* (Canth., Caps.). Stools with tenesmus. Bloody stools.

Rectum and Anus. Spasms of rectum. Sticking in rectum. Urging to stool. Bleeding piles. Oozing of serous or purulent fluid. Burning itching in anus. Intolerable burning at anus.

Accompaniments. Spitting up of ingesta with large quantities of mucus. Nausea. Gastric troubles during menstruation or following urticaria. Tearings in the abdomen preceded by pullings in the bones of thighs. Sensation of burning in the abdomen.

Remarks. The principal indication for the administration of *Copaiva* is the intolerable burning at the anus, with tenesmus and blood. In these symptoms it is compared with Cantharis and Capsicum. But in some points they differ. Cantharis has stools with scrapings of intestines and chill during stool as if water was poured over. Capsicum has thirst and when drinking causes shuddering.

CORNUS CIRCINATA. *Stools. Urging to stool with bearing down pain in abdomen: discharge of a few slimy lumps, with pressing and smarting at anus.* Discharge of only scanty, dark, and slimy fluid and offensive flatus. Scanty, bilious, slimy, with flatus and tenesmus, during and after the stool, burning pain at anus and a short distance within rectum. *Dysentery, with burning in anus and rectum and great debility.* Dysentery with abdominal pains, before, during, and after stool, with great debility and biliousness. *Ulceration of the mucous membrane of the rectum.* Chronic malarial troubles, with jaundice, tendency to diarrhœa or dysentery, enlarged spleen, etc.

Rectum and Anus. Urging. Pressing and smarting in anus. Burning in anus and rectum. Bearing-down pains in rectum and anus. Tenesmus.

Accompaniments. Depression of spirits. Inability to concentrate thoughts. Distension of the stomach and passage of wind. Rumbling in abdomen. Pain in the umbilical region. Jaundice.

Remarks. The medicine is used in cases of malarial fever with jaundice and dysentery. Urging and bearing down pain are associated with the mucous lumps.

CROTALUS CASCAVELLA. A few symptoms has been recorded with regard to this serpent poison. Prolapsus ani, urging and tenesmus followed by discharge from anus of thick, white mucus, like the white of egg. It has an important character, great desire for snow, without wanting either water or wine. Other symptoms may help the selection of the medicine. They are: epigastrium sensitive, can not bear clothing. Feeling as if a peg were sticking in the liver. Constriction of the throat as if a string were tied round the thyroid body. Pain in oesophagus extending to abdomen. It is a medicine of the hæmorrhagic or the sloughing form of dysentery mixed with blood.

Crotalus Horridus. *Stools.* Profuse dysenteric discharges, so that he became remarkably emaciated. Excessive thirst and repeated attacks of vomiting, there was watery diarrhœa with colic and tenesmus; there was also occasionally great restlessness with some twitching. Passed blood with mucus from the anus. Watery stools with colic and tenesmus. *Bloody stool; frequent; involuntary. Black, thin stools, like coffee-grounds, offensive.* Dysentery from noxious effluvia; from septic matter in food and drink; from foul water, etc. Excessive flow of dark fluid blood, or involuntary evacuations, great debility and faintness. Hæmorrhage, dark, fluid, uncoagulable. White (mucous) stools. Sloughing dysentery. Chronic hæmorrhage from the bowels. *Dark fluid blood, continued oozing with great debility, faintness and depression of spirit (phos.).*

Rectum and Anus. Tenesmus. Hæmorrhoids: great tendency to bleed, on using paper, on straining a little at stool, or on standing; in pregnant women; with menstrual irregularities; with heart or liver disease; in inebriates.

Accompaniments. Tongue swollen and mouth inflamed. Stomach unable to retain anything. Intolerance of clothing in epigastric region and beneath hypochondria (Lach). Swelling of abdomen.

Remarks. Crotalus is applicable to bad cases of dysentery with or without slough. It is indicated in cases where there is more blood than mucus. As a sequel to many adynamic fevers. Dysentery of violent character with profuse blood occurs in these cases. Chronic malarious fever with black stool, shewing disintegration of the colouring matter of the red cells as well as of themselves, requires the help of the medicine. It is a dangerous form of the disease and wants immediate care. All hæmorragic flux from the bowels, originating from septic matter, should have its first aid. Hæmorrhage from the bowels is the leading character of the medicine. The blood is generally dark, fluid and uncoagulable, with sinking of strength. Dr.

Hayward writes: "Crotalus exerts an idiopathic action on the digestive tube throughout its whole length, producing in the mouth and œsophagus congestion, hæmorrhage, œdema and pain; and in the bowels congestion, inflammation, hæmorrhage, diarrhœa, dysentery; the stools being frequent, liquid, bloody, dark, grey, involuntary; accompanied by tenesmus, and sometimes copious hæmorrhage; and frequently by nausea, vomiting, fainting, prostration."

Croton Tiglium. *Stools.* Involuntary with streaks of white, slimy, emulsion like substance, mixed with much clear, glairy fluid. Soft, slimy, frequent, with tenesmus. Stool as soon as he drinks; (the child has a stool and colic as soon as it nurses.) Every movement of the body renews the discharges. Producing at first very violent pains in bowels, with tenesmus. Discharges frequent and small. After lunch, scanty stool, mixed with mucus. Flatulence, then urging, stool sudden, small with flatus (Jat.).

Rectum and Anus. Swelling extending to anus, with burning. Pain as if a plug were forced outward. Pulsation, sticking and burning in the anus. Scraping in anus after stool. Constriction in anus on walking, with sticking at times. Tenesmus. Urging. Prolapsus ani.

Accompaniments. Hunger with rumbling in abdomen. Abdomen distended. On pressure on umbilicus pain felt down to anus, where there is constant protrusion.

Remarks. Croton Tig can be used in cases of dysentery with small, frequent stool. Stool after drinking or any movement should have its need.

Cubeba. *Stools.* Yellow, transparent, mucous. Mixed with whitish shining particles like rice. Bloody mucus. Involuntary. Worse at night in bed and better from rising from bed and moving about. Dysentery, *stools colourless, transparent, mingled with white particles like rice, with unquenchable thirst,* distended sensitive abdomen, worse from fruit, acids, etc. Bloody mucus. Frequent.

Rectum and Anus. Griping. Burning in rectum. Hæmorrhoids.

Accompaniments. Nausea. Vomiting. Burnings in epigastric and umbilical regions, with pressure. Flatulence. Griping. Burning in abdomen.

Remarks. Cubebs are rarely used in dysentery. It has a few prominent symptoms. The dysenteric stools are colourless, transparent mucus, mingled with white particles like rice. The particles seem to be coagulated mucus.

CUPHEA VISCOSISSIMA has been used by Dr. Roth in cases of dysentery. His points of indication are, stools decidedly dysenteric, small, frequent, bloody, with tenesmus and great white pain ; high fever, restlessness and sleeplessness.

Dr. Brown in Medical Century writes : "If you have a child that is fretful and feverish ; vomits curdled milk ; from hyperacidity of the stomach; has frequent green, watery, acid stools; or even if the stools are dysenteric, with great tenesmus and colic; high fever and restlessness, give *Cuphea*."

Cuprum Arsenicosum has the following symptoms : Rectal tenesmus, with almost constant mucous discharges. Chronic slimy diarrhœa with cramps in abdomen. Nausea and vomiting worse after eating and study. Obstinate hiccup. Cramp in stomach and bowels. Colicky pains in abdomen. Cramping pains in lower bowels, with extreme vesical and rectal tenesmus.

It has perhaps never been used in dysentery, but it has indications of its own.

(To be continued.)

REVIEW.

Practical observations upon the Chemistry of Food and Dietetics. Second Revised and Enlarged Edition. By J. B. S. King, M.D., 147 pages. $ 1·00. Postage 5 cent. Philadelphia. Boericke and Tafel, 1907.

In the introduction the author writes that "there has probably never been a time when the attention of the public has been more generally directed toward the care of the health than the present." This we think is not quite true. Human being since the dawn of intelligence proper has been always careful to the attainment of long life and the avoidance of disease which the flesh is heir to. Ample record of this is found in the ancient literature of India. In these days of trumpeting through newspapers and magazines we may think that "there has probably never been a time when the attention of the public has been more generally directed toward the care of the health than the present." Silent work was the order of the days gone by, and experience of sages of different ages were recorded for the benefit of mankind. But noise is the order of the day we live in and pushing-forwardness and self-advertisement have been ruining the cause of humanity. In our vain attempt to further the progress of the world we have been creating mischief which has been positively undermining the health of all nations. The so many preserved and chemical food prepared more for the sordid gain of money than for the benefit of mankind, has been doing immense mischief in the world. Certificates of recommendation for such food are not very difficult to obtain and clean pass out these dirty stuffs as of superfine quality and indispensable to the suffering humanity. It does not require many years' experience to prove that the stuffs which had been lauded to the heavens are worse than useless and many a time prove positively injurious. We side ourselves with those who advocate natural and fresh food which is infinitely more healthy and nutritious. The virtues of tinned food, even, of a few days standing, are immensely changed though the chemical composition may remain the same. For we must not forget that the virtues of the different substances do not depend upon their chemical composition.

We now come to the book proper and we have no hesitation in saying that the treatise is an excellent one. Every physician ought to know the chemical composition as well as the different virtues and properties of every kind of food materials. The author has given only the chemical composition and the food value of the substances in his book. The different virtues and properties of the food stuff can only be known by long experience and one would do well to collect these and publish them for the benefit of mankind. In our country the *Charaka* and *Susruta* are the oldest records of medical experience and even in them we find the properties of different kinds of meat and of different kinds of vegetables have been most exhaustively dealt with. Our modern Hindu physicians, I mean the Homœopaths, the Allopaths and the Kavirajes, would do well to note down their experience in practice of different kinds of meat and of the vegetables.

Besides the Chemistry of food we find a very useful chapter on "diet for special conditions," in which the author has elaborately dealt with the diet of old age, diet of brain workers, diet for the anæmic and so on. This chapter is exceedingly interesting and the experience of different savants should be included in the future edition.

The author, we hope, will add a page giving the contents of the volume and referring to the pages where they are to be found.

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

For the Month of April, 1908.

Date.	Barometer. (corrected.)	WIND.		TEMPERATURE.		Humidity.	CLOUD.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·714	S	4·6	100·0	80·5	78	*Nil*	*Nil*
2	29·682	S	5·0	102·0	80·5	69	,,	,,
3	29·715	S	3·1	102·8	81·0	80	,,	,,
4	29·769	S	4·0	101·0	80·5	84	3	,,
5	29·767	S	3·7	101·0	79·5	78	*Nil*	,,
6	29·667	S	4·8	103·0	81·5	82	4	,,
7	29·667	S	4·9	99·0	81·5	73	2	,,
8	29·683	S	4·2	103·0	81·8	70	2	,,
9	29·683	S	5·5	99·0	82·0	77	*Nil*	,,
10	29·707	S	5·7	100·0	80·5 ●	77	1	,,
11	29·692	S	3·8	102·5	81·0	77	*Nil*	,,
12	29·742	E S E	5·3	100·5	81·8	80	7	,,
13	29·823	S	4·4	102·5	82·0	77	*Nil*	,,
14	29·801	S	3·9	103·0	83·0	67	1	,,
15	29·803	N E	2·9	103·2	82·0	66	*Nil*	,,
16	29·814	Calm	2·9	100·0	78·0	57	,,	,,
17	29·743	S E	2·5	100·0	80·0	75	,,	,,
18	29·712	S S E	3·5	103·5	81·0	63	,,	,,
19	29·698	S E	4·6	105·5	82·0	71	7	,,
20	29·802	S E	4·2	101·0	81·0	73	7	,,
21	29·842	S S E	4·6	100·5	81·2	67	3	,,
22	29·792	S E	3·5	101·0	82·0	70	*Nil*	,,
23	29·769	S S E	5·2	102·0	80·0	54	8	,,
24	29·700	S S E	7·7	100·0	81·8	68	8	,,
25	29·671	S S E	7·5	96·0	82·0	71	9	,,
26	29·645	S S E	6·2	98·0	81·0	84	10	0·14
27	29·651	S S E	6·0	99·0	82·8	71	8	*Nil*
28	29·656	S S E	6·6	99·0	83·0	82	7	,,
29	29·724	S S E	6·5	99·0	83·0	70	3	,,
30	29·754	S	7·0	100·0	83·5	64	5	,,
Mean	29·730	87°S 16°E	4·8	100·9	81·4	76	3	0·14

We have noticed in our last issue that the atmospheric pressure was gradually declining from January. In the month of April, it is still less. January gave 30·070, February 29·935 and March 29·841. During the month the mean atmospheric pressure was 29·730, in contrast to all the previous figures. As in the last month the SE direction of the wind prevailed. The mean velocity of the wind per hour increased from 2·8 to 4·8. The mean maximum temperature was getting higher preparing the way for the month of June to attain maximum heat. In March, it had been 94·0, in April it became 100·9. The mean minimum in March had been 73·2, in April, it was 81·4. The mean humidity of April was 70 per cent. The rainfall in Calcutta was very slight, though it came on after a long time. On the 26th, it was only 0·14 inch.

It was noticed that in March cholera was playing a high game. In the week ending the 28th March, the mortality came to 252. During the week ending the 4th April, it was 210. In the week ending the 11th April, it again rose to 221. In the week ending the 18th April, it was 267, and in the week ending 25th April, the highest number of deaths of the month, numbering 314, was attained. It will be seen how the mortality of cholera was gradually rising from the beginning of the month of February till the end of April. The sad occurrence of the Ardhodaya Joga in the beginning of February was an incitement for the cholera microbes to spread through fresh foci. The result could not then be observed as the volunteer movement to help the bathers succeeded so wonderfully without many unhappy accidents. The subsequent spread was an unmitigated evil. Not only Calcutta but whole Bengal was affected by cholera. The two sides of the river Bhagirathi from Tribeni, near Magra, to Kalighat supplied different sources for the spread of the infection by the bathers. Even the Sonthal Parganas responded to the evil call. In no year Madhupur and its nearest places have seen such ravages from cholera. The septic tanks flowing their contents in the river might have contributed its share.

Plague had its quota during the month. In the week ending 28th March, the mortality was 115. During the week ending the 4th April, it was 151. In the week ending the 11th April, it was 142. In the week ending the 18th April, the mortality was 118, and in the week ending the 25th April it came down to 90. It was the lowest number of deaths of the month from the disease.

Mortality from smallpox rose in the first week ending the 4th April to 35. It was gradually rising from the beginning of March. Then there was decline. In the week ending 11th April, the mortality came down to 24. In the week ending the 18th April it was 28. Then, in the week ending the 25th April it came down to 22.

Deaths from fevers climbed down from 122 to 86 in the first two weeks. But in the last two weeks, the mortality rose to 112 and 114. Mortality from bowels complaints ranged from 72 to 55, during the four weeks of April.

During the above-mentioned four weeks, the respective total mortality was 883, 815, 821 and 871, making up 3390 deaths. The ratio of death during that period per thousand population was 51·92. It will be seen that the death rate was gradually increasing. In March, it had been 47·67 and in April it came to 51·92. Cholera, plague, smallpox and fevers were evidently on the increase.

EDITOR'S NOTES.

Some Remedies in Pregnancy.

The *North American Journal of Homœopathy* for March has the following :

" Ischuria and dysuria :

Nux 3x : Painful and frequent urination ; tenesmus of bladder with color of urine normal.

Camphor φ, drop doses two to five times daily : When urine escapes involuntarily.

Cuprum ars. 2x : Extreme tenesmus of bladder associated with tenesmus of rectum.

Equisetum φ 1x or 2x : Urethritis or irritable urethra.

Chimaphila φ, 5 to 10 drop doses : With history of chronic cystitis.

Urine suppressed : Acon. and canth. from φ to 3x, arnica 3x.

While this annoyance is a frequent one, it is often caused by a displaced uterus or pressure on bladder, which cause efforts should be made to remove ; yet the above remedies will very often be all that is required.

Pain in back and loins : Nux vom. 3x : Pains in the back from exertion or fatigue in effort to support the erect position.

Arnica 3x, 6x : Sacral pains, also in loins or lumbar region. Pains of a neuralgic character. These pains probably arise from pressure or from the pelvic nerves sympathetic with the womb.

Caulophyllum 3x : Pains extending from sacrum to abdomen and uterus near time of confinement.

Mag. phos. 3x : Pains worse when patient gets chilled or cold. Pains come and go, of the cramping kind. Heat, or getting the body warm gives relief. Our best efforts should be to stop these pains, for if they persist there may come a premature labor or a subsequent tedious and difficult labor."

Antipyretics.

The *Medical Times* of April has the following note :

"It appears to Woods Hutchinson, (*Monthly Cyclop.*, Jan, 08), that they simply act like an increased dose of the toxin, by depressing the vital resistance and preventing the temperature reaction. Aconite, Veratrum viride and the whole group of coal tar products probably act in this way. When we give these drugs in pneumonia, typhoid or appendicitis we are but pouring a second poison into the body of the unfortunate patient to suppress the resistance which the organism is making to the first. Such drugs make the patient more comfortable, and the doctor much easier in his mind for the time being. Ultimately they lower the temperature, slow the pulse; in much the same fashion, however, as a blow on the head with a club would quiet the struggles of a man resisting arrest, or a dose of opium will relieve a soldier on the march."

The view entertained is so extremely unscientific that the promulgator of the theory seems to know one thing with regard to the physiological action of the medicines. His ideas are concentrated on toxin. All medicaments in large dose no doubt have toxic influence. But when fever is reduced by infinitesimal doses of Aconite or Veratram viride, then there is enough ground for consideration that the medicine which has cured the case has not exerted its toxic influence. There are some other factors besides the toxic influence which has proved beneficial. It gives us the material for consideration, the nature of the action. It is not toxic but ionic. Toxic influence is confined to large massive doses. Ionic pertains to small infinitesimal particles.

Picric Acid in Burns.

The *Medical Times* of April writes :

"Kindleberger, in the *Military Surgeon,* reports 52 cases of burns which were consequent upon a boiler explosion on the U. S. S. Bennington. The clothes were removed, the dirt and grease were washed off with tincture of green soap and ether, and the sloughs and dead skin cut away. Wounds which had already been dressed with some oily preparation were gently wiped with some sterile cotton, and all oozing surfaces were dried in the same manner. Sterile gauze soaked in 1 per cent. solution of picric acid was then applied to the burnt surface and covered with paraffine paper, cotton pad and gauze bandage. If the face was burnt it was entirely covered with a gauze mask soaked in the solution. The dressings were changed daily. Those cases which had been previously treated with oils and ointments, and which were admitted with burnt surfaces bathed in pus, and suffering from high fever improved rapidly under Kindelberger's method, which gave pain for ten or fifteen minutes fter the application, but later on had an anæsthetic effect, the pain ing less each succeeding time the wounds were dressed. Picric acid solution, observes the *Therapeutic Gazette*, stains the skin; surgeons and nurses should, therefore, use rubber gloves in applying it. Probably the solution, by coagulating albumen, aids materially in stopping oozing and pus formation, and also in preventing the absorption of toxic material. After the first few day's dressing it may be applied every other day or every third day. After the gauze is removed the burnt part should be irrigated with picric acid solution, and if the gauze adheres it may be softened with the solution before it is taken away, so that the new granulations will not be torn. Where fingers or toes are burnt layers of picric acid gauze should be placed between the parts to prevent adhesion. In every case in which this treatment was applied by Kindelberger the urine was dark red and frothy, the conditon being attributed to hemoglobinuria and some carboluria. Frequent urinary analysis showed no albumen; and the discoloration was considered of no consequence. Patients with such urine and high fever at night were given small doses of magnesium sulphate for its antidotal and purgative effects. Braisted, in his report on the "Japanese Naval Medical and Sanitary Features of the Russo-Japanese War," states that many extensive burns were treated among the Japanese by means of a picric acid solution. Kindelberger concludes that picric acid should be used locally in all burns however extensive or severe, to get a clean wound, rapid healing, diminished fever and lessened scarring; he considers it as much a specific as antitoxin in diphtheria, mercury in syphilis and quinine in malaria."

Doubt can be entertained whether Picric acid has the power to cure severe cases of burns. Whether the sudden onset of the low condition and the subsequent intestinal hæmorrhage can be prevented by the use of Picric acid and its antidote the Sulphate of Magnesia is a dubious issue. All that can be said at present, before making extensive trial is when one per cent. solution renders the urine surcharged with hæmoglobinuria and carboluria, it will be safe, not to push on the remedy when it can not ameliorate the condition of the patient within the first three or four days. It can be applied when the shock is over and cannot be persisted for a long time.

Stupors.

From *Medical Times*, June, we take the following:

" W. Hays (*N. Y. Med. Jour.*) submits a careful differentiation. In *alcoholic* stupor pressure over the supraorbital nerve will usually elicit a response, though it may be with difficulty; and the patient will often vehemently protest with words or blows. The face is flushed. An alcoholic odor may pervade the breath and the vomitus if there be any; absence of this odor will almost positively exclude alcoholism. The pupils are equal; either normal in size or slightly dilated and reacting to light. There is no lateral deviation. The pulse is rapid, full and strong. Respirations are of normal frequency; but deep and sometimes stertorous. The skin is very commonly cool and moist; the temperature either normal or slightly subnormal, unless delirium is present, when there is a rise of temperature. A cerebral lesion may coexist with the drunkenness; and great care must here be taken in the diagnosis. The stupor of *apoplexy* is deeper than that of alcoholism; it, approximates coma. The face is suffused and cyanotic; sometimes pale. The pulse is full, slow, and of increased tension; the artery often shows atheromatous changes. The respirations are slow, noisy and stertorous; oftentimes they are irregular; Cheyne-Stokes breathing may be heard. The cheeks are blown out, with spluttering of the lips—more marked on the side of the unilateral paralysis, if this be manifested in the face. The temperature may be normal or subnormal; though in cases likely to prove fatal fever may be found. The pupils are dilated, often unequal, and do not react to light nor consensually. Hemorrhage into the pores or the ventricles will produce contracted pupils, because of the irritation of the nucleus of the oculomotorius nerve. Conjugate deviation of the head and eyes, or persistent turning to one side—that on which the hemorrhage has occurred—may be present. Unilateral facial paralysis is indicated by the droop of one angle of the mouth, the effacement of wrinkles on the affected side, and the flapping cheek. Greater flaccidity of the limbs on one side may be noted by raising them and letting them fall; those on the affected side will droop as though dead. The skull should be carefully examined for possible injury; it may be important, however slight it might appear. (A fracture of the internal plate of the calvarium or on the opposite side by *contre-coup* may accompany a slight contusion.) The apoplectic onset varies in suddenness, depending on whether it is due to cerebral hemorrhage, embolism or thrombosis. Stupor or coma, with hemiplegia, complete or incomplete, may occur in the course of pachymeningitis interna. In *opium poisoning* the patient can be aroused unless very profoundly narcotized. The face is at first pale—later dusky and cyanotic. The pupils are strongly and equally contracted. The respirations are slow and may drop to eight a minute. The pulse is slow and full. The temperature is normal or subnormal. The skin is warm and moist. The smell of laudanum may be noticed in the breath. *Uremia* is an intoxication due to the retention within the circulation of the excrementitious substances normally eliminated by the kidneys. The patient may be aroused temporarily from the unconsciousness which may be preceded by or be alternate with epileptiform convulsions. The face is pale, swollen and œdematous. The breath exhales a urinous or sweetish odor. Examination of the urine shows evidence of renal disease. The pupils are equal and usually widely dilated, though they may be normal and reacting to light. There may be twitching and rigidity of the extremities. The pulse is rapid. The respirations are frequent and irregular; dyspnœa or even Cheyne-Stokes breathing is occasionally observed. The temperature is usually normal; but may at times be subnormal. Convulsions tend to elevate temperature. If the use of the opthalmoscope is possible, nephritic retinitis may be discovered. Sometimes uremic hemplegias transient in their nature and unexplainable pathologically may be noted."

The note is no doubt interesting, but the writer goes to symptoms only without the history of. the case. History is necessary to come to conclusion. Alcoholic coma is associated with mutterings and vehemence. The patient wants to rise by fits and starts. In a deeper insensibility than this, dashing of cold water on the face partially rouses the sensation. In apoplectic coma complete insensibility prevails. The pupils unequally dilate. No kind of attempt can rouse the patient from the coma. Stertorous breathing accompanies to make the final. Cases have been observed in which alcoholic insensibility ended in apoplectic coma. Opium poisoning presents different picture. Contracted pupil as a rule supervenes, to be followed by dilatation near the end. Convulsion generally accompanies.

CLINICAL RECORD.

Foreign.

CLINICAL CASES.

By C. E. WHEELER, M.D.

BEFORE I set before you any new cases I wish to give a further report upon two of those cases which I had the honour to submit to you some months ago. The first was a case of rectal carcinoma in a woman of fifty-seven, seen first in January, 1907. I may remind you that then she had a large mass obstructing the bowel completely, or almost completely, with consequent loading of sigmoid and colon, and secondary masses of growth in the abdomen. Under treatment with unit doses of *Ornithogalum* and *Hydrastis* and *Podophyllum* as intercurrent remedies, she improved steadily for six months, gaining a stone in weight. Partial obstruction continued, and, except on one or two occasions, the motions were always loose, bleeding and discharge became less and less frequent, and pain greatly diminished. From June to the end of August the case remained stationary. In August, pain, chiefly in the sacrum and surrounding regions, began to be severe, and weakness increased so that she was able to come to the hospital more and more seldom, and the later reports were conveyed to me by her daughter. There has been some loss of weight and some bleeding during the last few months, but the motions tend to be more formed, and it is the pain and weakness that distress her. The pain was at first controlled by *Scirrhinum,* later when that failed *Dulcamara* 30 did some service; finally recourse had to be had to *Opium,* at first in small doses, finally in the form of $\frac{1}{8}$ grain of acetate of morphia. This dose, repeated as necessary, but required at least once a day, has been maintained since November, and I wish to record my belief that it has had distinctly a beneficial influence on the growth and the cachexia. The patient to-day is better than in last December, when I thought the end very near. Besides the morphia she has taken *Terebinth.* 3x, and latterly *Arsenic* 3x. I make this report to keep you acquainted with the further progress of a very interesting case. When I saw her first I thought she had at most three months to live. She is still alive fifteen months later, and, apparently, after a relapse, again slightly improving.

My second case is that of a girl of twenty-two. I reported her to you as a case of "dyspepsia" cured steadily and rapidly by *Natr.*

mur. (12 to 200, but at the time I mentioned that the marked constipation persisted, although in every other respect the girl was well. She came at intervals till the end of 1907, with no return of gastric symptoms, but no relief to the constipation. On various indications, after prolonged trial of *Natr. mur.* in various potencies, *Kal carb.*, *Silicea*, *Plumb.*, *Phos.*, and *Caustic.* were given with little or no benefit. Upon the 3rd of January she received one dose of *Lobelia erimus* Ø. The week following there were three natural actions of the bowels, and after a week a daily action, which has continued to the present date. I gave the dose because of its marked effect in relieving constipation in some of Dr. Cooper's cancer cases, but am at a loss to explain its action. I chose it because, although presenting no marked symptoms, the girl always looked "poorly"; sallow without much anæmia, and remained rather ill-nourished. That is to say, her condition, though far from cachectic, suggested a very mild degree of cachexia, and on that indication I gave her a cancer remedy, and, fortunately, with success.

SLEEPLESSNESS—*Coffea.*

My first new case is a very simple one. A lady of sixty-six came to say that for ten years she had not known what it was to sleep well, and latterly had thought herself lucky if she got two or three hours during any one night. She was restless but had no special symptoms beyond numbness and tingling of the fingers occasionally. She was given *Coffea* 6 night and morning. At the end of a fortnight she returned delighted with the increased sleep she had obtained. The time of sleep gradually lengthened till now it is practically normal, although she says she cannot do without the medicine. Dilutions 3 and 6 have been used throughout, and occasional doses of *Kali carb.* 200 because of a tendency to wake at 3 or 4 a.m. I think this intercurrent remedy helped the progress of the case.

CHRONIC NEPHRITIS.

Next I want to set before you two cases of chronic nephritis—the first in a girl of twenty-five, dating from scarlet fever eight years previously. She said she was subject to attacks of hematuria and frequent pain, had been in two hospitals, and was unable to do anything because of these attacks. She has had eight months' treatment. She began to improve at once, and for the last three months has been quite free of pain and able to work. The albumen remains much the same in amount, but she has gained weight, and, by her mother's account, has made more progress than at any time during her long illness. I report her as an instance of the fact that even considerable albuminuria need not prevent gain of weight and strength. Her remedies have been chosen for the pathological condition and have been *Kali chloratum* 3, *Quin. sulph.*, which aggravated in 3x trit. and seemed to do good in the 30th, and *Plumb. acet.* 1x. The second nephritis case is a man of fifty-six. He was in the hospital (L.H.H.) for fourteen weeks, and was very shaky when first I saw him. He likewise has steadily improved during fifteen months. The albumen is variable in amount, but decidedly lessened, and he has been at work most of the time. I should add that eggs and fish (once a day) have been permitted to both these patients besides the ordinary milk and non-nitrogenous diet, and I think both have been the better for them. The man's remedies have been principally *Kali. chlorat.* 2x to 6, and *Barium carb.* and *mur.* 3x, the latter remedies chosen because of a certain degree of arterio-sclerosis. Both these cases therefore, have, I admit, been treated principally as diseases. I must plead, however, that they present few or no symptoms except pathological ones. I should like to underline *Kali chlorat.* for chronic nephritis.

ABDOMINAL PAINS—*Chionanthus.*

A woman of forty-one came to the hospital complaining of attacks of abdominal pain, at irregular intervals, lasting seven or eight hours, and accompanied by more or less jaundice, vomiting, and distension. This condition had continued for six years. There was no enlargement of the liver, but much tenderness in the right hypochondrium. I took the attacks to be biliary colic, and began treatment with *Berberis* φ. The following fortnight she had three attacks. *Chelidon.* φ succeeded no better. After four weeks with little or no relief she was put on to *Chionanthus* φ, and now has had no real attack (though mild threatenings now and then) for six months, except for one fortnight when *Iris v.* was substituted in November last. *Chionanthus* has been continued fairly steadily—indeed, she will not be left without a supply. As her attacks were coming every few days when she came to the hospital and for a month thereafter, I feel bound to attribute some effect to the *Chionanthus.* I must add, however, that latterly she has been subject to headache (frontal), and has only lately obtained some relief from this complaint by means of *Lycop.* 200. So that although considerably improved, she is not yet in a fully satisfactory condition.

GASTROSTAXIS—*Ipecacuanha.*

A girl of seventeen came with a history of hematemesis at frequent intervals (every few days) for five years. < at catamenia. She was bright and cheerful, had no pain after food, and the bowels acted regularly. The blood was bright red. I took it to be a case of the kind Dr. Hale White classifies as gastrostaxis, hemorrhage independent of ulceration of the stomach, and gave her *Ipecac.* 6. That so far (a period of two months) has been the end of the hemorrhage. It has not appeared again.

HEADACHE—*Iris.*

A woman of fifty-four stated that for four and a half years since the climacteric she had suffered once a week from severe headache, with vomiting. The pain began in the vertex of the right temple, and was accompanied by great thirst and followed by thick deposits of urates in the urine, *Iris vers.* 3 was given night and morning, and *Iris* 30 to take during an attack. This treatment gave relief at once. A fortnight after, *Iris* 1 was given night and morning, and since then—January 17th—only three slight attacks have been reported.

EXOPHTHALMIC GOITRE—*Adrenalin.*

A man of forty-one came in June, 1907, with a history of twelve months' illness. He had no enlargement of the thyroid but very marked exophthalmos, a pulse of 144, tremors, flushes, sweats, and inability to work. Both arteries to the thyroid had been ligatured at Guy's Hospital without result. He was thin, and told me that he had lost five stones in weight. He received first *Adrenalin chloride* 6 night and morning, and *Thyrodin* 12 once a week. A fortnight later he felt better, and his pulse was 108. Treatment was continued. On July 16th pulse was 117. *Thyroid* 3x twice a week was tried, and *Adrenal. chlorid.* 3 twice daily. July 30th, though he said he felt better, I saw little change. *Adrenal. chloride* $\frac{1}{1000}$ was now applied locally to the thyroid and *Calc. fluor.* 3 administered, and this treatment continued for a month. He had now lost his flushings and sweats, and tremor was rather less, but the exophthalmos was unchanged and the pulse 108. September showed little further advance; local applications were abandoned. On October 1st *Adrenalin* 3x was given twice a week in 2-grain doses. From that time he has improved steadily. He has now gained over three stones, has been hard at work since December. The pulse goes to over 100 after he has worked, but in the mornings is about 88. The tremor is less, and the exophthalmos decidedly less. The case is incomplete, but I have judged it worth recording even in its present state.

PHTHISIS—*Phosphorus* AND *Tuberculin.*

Only a brief mention need be made of this case. A man of thirty who came for repeated attacks of hemoptysis, not severe but troublesome. He had had six months in a sanatorium and gained two stones there in weight, but I found definite physical signs at his left apex, and as his work was in town (shop-work) I was at first a little anxious for his future. He received *Tuberc. K.* 30 in occasional doses, and *Phos.* 3x twice a day and 30 at night. The bleeding stopped at once, and has not recurred. I have had him under observation for eleven months, and his apex has now entirely scarred up. He has kept his weight and continued his work, and a bad cold during this winter revived no signs of any lung mischief. The *Phos.* has been given from time to time, and *Tuberc.* occasionally.

ANGIONEUROTIC ŒDEMA—*Apis.*

A woman of fifty came with the history of sudden occurrence of the body, especially the hands and the throat, lasting twenty-four hours. These had come from time to time for years, but previously she had suffered from attacks of gastric pain and vomiting. These "bilious" attacks, as she called them, still came occasionally, but her trouble was the œdema, which now appeared every fortnight or oftener, and caused her great alarm when it affected her throat, for fear she would choke. She was given *Apis* 1x twice a day, and *Apis* 30 to take every half-hour if œdema appeared. This was on December 31st; on January 14th there had been no attack. Treatment continued. On January 28th she reported that œdema seemed to be about to commence in one foot but was checked by *Apis* 30, and an attack of pain and vomiting followed. She therefore received now *Berb.* φ night and morning (as the site of the pain. was the right hypochondrium and flank, and the urine showed deposit of urates after the attack),and *Apis* 30 was to be taken if œdema supervend. On February 18th she reported a transient swelling of the elbow, and on March 10th no attack either of œdema or pain. As previously for years she had suffered every month, and latterly at least every fortnight, she is greatly pleased at three months' practically complete freedom.—The *Homeopathic World,* May 1, 1908.

Gleanings from Contemporary Literature.

RADIUM AS AN INTERNAL REMEDY IN CANCER AND DISEASES OF THE SKIN, WITH PROVINGS AND CASES.

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A priori it would seem exceedingly unlikely that such a potent physical agent as radium has proved itself to be should be anything other than a great power when used internally as a remedy. But how are we to find our indications for its use, and the best preparations in which to administer it? The homoeopath has but one answer to these queries—*try*. Thanks to the enterprise of Mr. Armbrecht, all workers with radium, be they homoeopathists or physicists, have an opportunity of carrying on their experiments. Mr. Armbrecht prepared homoeopathic potencies of radium bromide, and the 30th potency of this salt is the one I decided to put to the test first of all both for proving and curative work.

The points supplied by those who had worked with radium as an external remedy were not many, but they were distinctive enough. In the first place M. Curie himself supplied a "leader." "If there is one thing I know about radium," says M. Curie, "it is that *it will burn.*" In the *Pall Mall Magazine* of October 17, 1903, is an account of a visit paid to M. and Madame Curie by Mr. F Lees, and in the course of the interview M. Curie made the following remarks:—

"The doctors think that they can cure lupus and polypus—perhaps cancer—with it, but I know nothing about that, it is their business, not mine. But *it will burn.* I can testify to that. I put a tiny bit of a salt of radium in an India rubber capsule, fastened it on my arm and left it there ten hours, When I took it off the skin was red, and the place soon turned into a wound, which took four months to heal." He pulled up his sleeve and showed a white cicatrice the size of a shilling, with the skin round it puckered and discoloured. "Another time I tried it for half an hour only. A wound appeared *at the end of a fortnight,* and took another fortnight to heal. On a third occasion I tried it for eight minutes only. *Two months later* the skin became red and a bit sore, but it soon passed off."

Another point brought out by M. Curie's experiments is the *lateness* of the appearance of the symptoms, and the long time it took for the ulcer resulting from the burns to heal.

The tremendous energy thrown out by radium will naturally suggest to the homoeopath a centrifugal action—an antipsoric effect—in throwing central diseases out upon the skin. Hence homoeopaths would not be surprised to find in it a remedy in many affections appearing on the skin. The use of radium among allopaths has been confined to its use as an external agent in external affections, notably epithelial cancer, lupus, nævi, port-wine stains or nævi-flammei; and Mr. Armbrecht informs me that he had frequently seen warts disappear after a few applications of the rays. I shall be able, I think to show homoeopathic warrant for many of these "allopathic" uses.

In addition to M. Curie's experiments on himself many observations have been made on animals and some on patients. Plants have also come under experiment. Under the action of radium rays plant growth and development are checked, ferments lose their power, protozoa are first stimulated and then die. Culture growths are arrested and then die. Shelled organisms are more resistant than those containing chlorophyl. In animals, development and regeneration are retarded. Red corpuscles lose their hæmoglobin and salts into the serum. The central nervous system is peculiarly sensitive to the action of radium, and young animals are more susceptible than the older ones (Louis Hussakof, *Med. Record*, July 1907; *Brit Med. Journ.*, September 21, 1907).

Mr. Roux made experiments on animals early in 1904. If a tube containing radium was placed near the skull of a small (*e.g*, mouse) paralysis and death followed. If it were hung above a cage containing animals the same effect followed, but at longer intervals. Among the effects noticed by Roux was redness and irritation of the conjunctivæ of the animals.

The first effect of radium held near the human skin is to cause an intense erythema, which leaves behind a brownish pigmentation, unless it has been severe enough to lead to ulceration.

These were the data available from general medical literature. I will now proceed to give an account of the provings.

PROVINGS.

I.

A. B., male, aged about 50, blue eyes, clean-shaven, nervous, sanguine, good health.

April 22, 1904.—Took six globules of radium bromide 30.

April 26, (fourth day).—Discovered two white patches on penis, one at root, one on right side. These patches were covered with fine scales and proved to be of the nature of psoriasis. They cleared off and others appeared on other parts of the organ; had circular or serpiginous edges. This recurred for many months. There was absolutely no abnormal sensation in them.

May 2 (eleventh day).—Shivery; bilious feeling; stools paler than normal and more frequent. This condition lasted three days, when the shivering departed.

May 5 (fourteenth day).—More mucus in nose without having taken cold.

May 7 (sixteenth day).—Bowels very relaxed still, stool in loose bits, parts almost watery, darker in colour. This condition lasted many days; sometimes the stools were light, sometimes there were tags of mucus. They did not become normal till July 27. This morning tongue very sore, right side, about the middle. A callosity or corn on the inner border of right foot, which had been present at least twenty years, was found to be almost gone; it disappeared completely soon after and has not returned.

May 19 (twenty-eighth day).—Eyes smart and looked red; this was noticed by others. This passed off and reappeared with greater intensity later. Passed away about June 7.

June 5 (forty-fifth day).—For a few days the skin of the face has been irritated; this day is very much so. This condition gradually got worse and lasted altogether over two months. The skin became thickened and, when scratched, which gave the greatest relief, exuded a clear moisture. It was greater after washing (which caused oozing) and after shaving (shaving could only be done, in consequence, every second day); relieved by washing with *very hot* water; worse at night when warm in bed. It prevented sleep, and a pocket-handkerchief had to be kept applied to absorb the exudation. The sensation was an intense itching and scratching was intensely delightful, but could only be sparingly indulged, as it was followed by burning and stinging along with oozing.

June 12 (fifty-second day).—For several days past has had pain under left scapula. It appeared to have passed off upon 11th, but was felt on waking on 12th; worse on moving and putting shoulder back, better after rising.

August 5 (eighty-eighth day).—A small nævus (of the cancroderm variety) about centre of chin to the right of middle line has turned black. In a few days this scaled off and the nævus was cured.

August 7 (ninetieth day).—After several vain attempts to arrest the march of the proving, which was becoming well-nigh intolerable, rhus venenata was selected as a possible antidote. This it proved to be. The next day the face was decidedly better, and, under the continuance of this remedy, the skin gradually became normal after scaling.

August 9 (ninety-second day).—The skin could be rubbed and scratched without causing any oozing. In a few days it was possible to resume the daily shave.

August 29 (112th day).—A slight recrudescence occurred and again rhus ven. was taken. The same thing occurred the following spring after motoring. At times during the proving there was slight inflammation at the umbilicus.

II.

Miss X., aged 34, rather dark, bilious temperament, somewhat athletic build. Took radium bro. 30, six globules, on June 3, 1904, at 10 p.m.

June 4 (second day).—Dry mouth in morning. Headache in occiput in the morning; a tight feeling increasing on motion. In evening indefinite toothache.

June 5 (third day).—Still headache, increased on moving about. No appetite for lunch, feels sick, cannot eat meat (this symptom lasted many months). Tongue white. Chest feels tight, as if she could not get air enough. Hands cold.

June 6 (fourth day).—Still feels sickish. Unable to eat bacon for breakfast. Can only eat fish for dinner. Weight 9 st. 3½ lb.

June 24 (twenty-second day).—Still off appetite for meat; gets a stuffed-out feeling after food. Cannot smoke (the prover, as a rule, smokes cigarettes and inhales). Bowels confined.

I now began to treat her for the condition and ordered sulph. 30 night and morning.

July 6 (thirty-fourth day).—Got indigestion after the sulph.; symptoms continue. The period, which is due, has not appeared. Skin of face very dry. An eruption which she had on the chest before taking radium had disappeared. Tendency to piles last three weeks. Earache in right ear to-night. Pulsatilla 30 was given, and afterwards merc. viv. m. i.

July 13 (forty-first day).—Much pain in year, stitching, throbbing. The ears were syringed and much wax removed from both and hydrastis 30 given.

The ear continued to give trouble, though in a less degree, and she was deaf off and on. The indigestion and stuffed-up feeling alternate with earache or pain in the chest. The period now came on and was no different from ordinary.

July 20 (forty-eighth day).—Has been able to smoke the last two days. Weight 8 st. 13¾ lb., a loss of 3¾ lbs. The patient looked very ill all this time.

July 27 (fifty-fifth day).—Feeling very seedy, as if going to be ill; as if she could hardly crawl about. Throat sore; ear aching; feels as if bruised inside. Aversion to meals continues.

I was getting anxious about this prover, and as soon as I found an opportunity, after I had discovered in rhus ven. an antidote to radium, I gave that medicine on August 27 (eighty-sixth day).

August 29 (eighty-eighth day).—This morning, for the first time, ate bacon for breakfast. Had no indigestion to-day. Period rather less painful than usual. An old boil on the thigh became active; corns which have given no trouble for years became very painful.

III.

Mrs. W., aged 48, tall, grey eyes, nervous. Much troubled with neuralgia and headaches after influenza, but at the time of the proving free from them.

June 3 (first day).—10 p.m. Radium bro. 30, six globules.

June 4 (second day).—Pricking and peppery sensation in left nostril in evening.

June 5 (fifth day).—Generally seedy to-day. Much headache.

June 10 (eighth day).—Has been off appetite, especially for meat.

Old symptoms now returned and the prover had to be treated for them: thus the proving had to be considered at an end.

IV.

Dr. T. G. Stonham has kindly given me the following account of a proving made on himself.

On February 24, 1906, I took five drops of radium 30x before breakfast and again before lunch.

February 26 (third day).—Noticed some secretion on the lashes of the right eye on waking.

February 27 (fourth day).—Right eye began to feel sore, with occasional sticking pains and increased secretion. There was some general malaise. The eye symptoms continued through the week. The eyes were < reading and artificial light; > closing the eyes. The eyes were injected as to the sclerotic vessels traversing it up to the cornea both from the inner and outer sides. Occasional itching of the lids (< upper lid.)

March 3 (fifth day).—Examined by Dr. Macnish, who reports: Blenorrhagia of right eye; injection of sclerotic and slight injection of the lower part of the cornea; slight infiltration of the lower part of the cornea; the eye looks watery; tension the same in the right as in the left eye; pupil of right eye dilates less actively than that of the left; it also contracts more sluggishly. Slight patchy erythema diffused over the forehead.

March 4 (tenth day).—Woke with right eye very painful, with a feeling as if there was a foreign body in it; better after going out into the air. For the rest of the day felt it very little.

March 5 (eleventh day).—Right eye much better. Left eye has had a sensation as if a loose eyelash were in it on several occasions, not very painful; slight soreness of ball of left eye. A few injected vessels run over the sclerotic to the cornea in the left eye.

March 6 (twelfth day).—Both eyes much better. All symptoms rapidly cleared off from this date.

I will now give a proving of another description, and a very remarkable one it is. I take it from an article by Dr. Burleigh Parkhurst, of los Angeles, California, which appeared in the *Pacific Coast Journal of Homœopathy* of June, 1904. Dr. Parkhurst's article I consider one of the most valuable contributions which have hitherto appeared on the action of this remedy. I shall make large quotations from it, and I wish here to record my most cordial thanks to Dr. Parkhurst for publishing his experience. He has used radium internally as well as externally, and I believe the first internal use recorded is that contained in his article. I quote now from his article what I term.

PROVING V.

Dr. Parkhurst says: "The most remarkable experiment that I have ever seen reported was that of Goldberg of St Petersburg. He fastened to his arm 75 mg. of radium in a box, the exposure being made through a mica window. The box was strapped to the arm for three hours. The strength of the radium is not stated, but probably it was a low grade radium, because of the quantity used, and also because at that time low grade radium was more commonly used. (Fourth day).—In four days after the exposure a red patch appeared, which became larger and increased until on the fourteenth day there was a necrotic ulcer, which spread in a serpiginous form.

"Later, four other similar ulcers appeared on the *chin*, on the *hand*, and one in the *groin*, affecting the tissues down to and including the corium. These lesions broke down in a superficial sloughing ulcer, which increased for several days and then retrograded and gradually healed, the *distant lesions healing first.*

(Twenty-first day).—"After three weeks the first lesion on the arm was an atonic ulcer in process of repair. From first to last there was no pain, no swelling or heat locally, and no fever or other constitutional symptom. The ulcer was cold, necrotic and torpid.

"You will notice," continues Dr. Parkhurst, "that this is very different in action from an X-ray dermatitis, and therefore the action of the radium rays is definitely different from the action of the X-ray. I think that the ulcers which appeared at parts distant from the site of exposure are of considerable significance, although I have seen no comment made upon it. To my mind, taken in connection with certain characteristics in a case of my own, which I will call your attention to later, *there is some kind of metastatic action.* It seems to me most probable that *the blood serum is one of those substances which are capable of becoming radio-active, and that in this case the blood became radio-active and had an effect on the tissues distant from the point of exposure* wherever from any cause the vitality was weakened." (Italics mine, J. H. C.)

Passing from this proving, I will now give a case treated with radium rays by Dr. Parkhurst, because this case shows so plainly the *constitutional* action of the rays and confirms certain points in the provings detailed above.

In this connection I may say that, though I had marked Dr. Parkhurst's paper for future reference, I was unaware of its essential importance until I studied it recently. Great was my pleasure to find that many of the symptoms of my provings were confirmed by Dr. Parkhurst's observations.

"The first case," says Dr. Parkhurst, "that I got for experiment with radium was one of inoperable carcinoma of the cervix. The woman should have been operated upon six or eight months previously. When I was called in the case was in the last stage. She probably had not more than ten days or three weeks to live. Locally the vagina was entirely filled with a mass which involved apparently the posterior wall of the uterus. The vagina was so completely filled that it was difficult to get the finger within the introitus vulvæ. The systemic condition was one of apathy and torpor. She was œdematous from one end of the body to the other. She was in a jaundiced condition, had not slept without an opiate for a considerble time, could not raise herself from the pillow nor turn herself in bed, profoundly anæmic, had no appetite, no action of the bowels

"*Case 2.—Acne Rosacea.*

"A sister of the last patient, a stout, florid woman, had a similarly unhealthy skin, marked rosacea of the face, wished to take radium water, because it helped her sister so much. She took it for two weeks, and the rosacea was very markedly improved, but she stopped treatment before the rosacea was well because she said she did not like to drink so much water. She was taking four glasses a day of water prepared at the same time and in the same way as that I was giving her sister."

I will now record some of my own cases, and I may point out that in nearly all of them a single dose of the remedy was given in exactly the same potency as that used in the proving. This disposes of the somewhat specious "explanation" of homœopathic cures by postulating an "opposite action of large and small doses" The dose which caused was the dose which cured, and the potency was the same in both.

Case 3.—Prurigo.

A colleague consulted me about himself in October, 1906. He was suffering from an itching of the arms chiefly, but extending all over the body. I first suggested æthiops antimonialis, and here is his report thereafter:—

"November 3, 1906.—I have been on Æthiops since I saw you, but with little or no improvement, and this itching hide of mine makes life a burden. No definite symptoms, except aggravation towards evening and night, worse on the arms and neck, but extending more or less all over, not burning itching, but simply irritation with raised surface after scratching. Have tried everything likely—urtica, croton tig., copaiva, antipyrin 2x, &c., &c., and am really getting desperate."

This forcibly reminded me of proving No. I., and so I prescribed a single powder containing six globules of radium No. 30. In a week he reported himself distinctly better. The improvement steadily went on to complete cure in a few weeks' time, without further repetition of the remedy.

Case 4—Prurigo.

Mrs. C., aged 84, had a paralytic attack affecting the left side of the body in March, 1906. The disease followed influenza, and was probably occasioned by it. The patient was previously otherwise healthy, except that she was somewhat feeble on her legs.

May 20, 1907.—She wrote from the country to ask if I could do anything for an intolerable itching seizing her day and night at intervals, affecting the back across the shoulders and down the backs of the arms. A carbolic lotion which had been prescribed by an allopath failed to give any permanent relief, though it eased temporarily. Rad. brom. 30. gl. iv. in powder, one dose.

May 24.—Itching not quite so persistent. Begins at 2 a.m. and lasts till the lotion is applied. After a week the lotion was discontinued.

June 6.—Attack now begins 3 a.m. and lasts till 4 a.m., then dies down till breakfast. It is intolerable for the hour.

June 16.—I was in the country and had an opportunity of seeing the patient and her attendants. The latter were very emphatic about the improvement. The patient does not disturb her nurse at all in the night now, and the irritation does not come on till 5 a.m. There is none at all during the day. I was able to satisfy myself that there was no eruption of any kind. The skin was perfectly smooth and natural, except for a very slightly roughened patch over the left scapula. Repeat rad. brom.

July 4.—Better.

July 21.—Well.

Case 5.—Corn of Right Foot.

I gave to a gentleman, aged 60, who had long had an eruption of psoriasis on the back, a single dose of radium bromide 30 on July 27, 1906. There was no marked effect on the eruption, but the patient noticed that a corn fell off from the right foot, though a similar corn on the left foot was unaffected.

Case 6.—Eczema.

Mr. A. D., aged 34, tall fair, reddish hair, subject to hay fever, and during one attack had an abscess in the nose, after that he had boils in various parts, and following the boils eczema. He had taken in his time "gallons of tonics," and in spite of that had been losing weight slowly for the last two years. He had been twice vaccinated, the last time two or three years before I saw him. Before the boils came out he used to suffer from headaches. The localities in which the eczema was worse were the penis, scrotum and groins, which were vividly red and moist. The axillæ were also affected and there was a good deal about the face. In the groins the irritation was excessive, affected, no doubt, by the patient having hernia and being compelled to wear a truss. Thuja 30, and afterwards sulphur 30, at bedtime, were given, and nux. v. 30 in the morning. On February 3, 1905, the condition was as follows :—Left eye swollen up ; light very painful. Eczema on face, axillæ, groins, penis, scrotum. Itching very great on hairy parts. Without discontinuing the morning dose of nux. v., which he had been taking some time, I stopped the sulphur and gave a single dose of rad. bro. 30.

March 6.—Better. Irritation decidedly better. Axillæ clear. Scrotum very much better. Slight eczema in moustache. The back has come out in a crop of acne, which is spreading partly over the chest. He feels more fit. Freer from headaches. *Not repeated.*

April 3.—Eczema got very much better. Then, fourteen days ago, boils come again. Headaches lately troublesome. Bowels act daily. Anus irritable ; a little external pile. Eczema rather vivid where truss presses. Scrotum not bad. Chest and back spotty. Repeat rad. bro. one dose.

May 12, 1905.—Eczema decidedly better. Penis and scrotum nearly well. No hay fever. Right eyelid feels heavy and right eye hurts if he reads at night. *Repeat.*

July 12.—Scrotum all right. Very much better altogether. Very little hay fever.

In this case and the next the skin trouble was most severe about the generative organs. The fact that in prover No. I. the first manifestation appeared in the region gave one point of similarity—*locality.* And although in the prover there was no irritation in this part, there was very great irritation elsewhere, and this gave a second point of similarity. It is quite practicable to combine the qualities of separate symptoms in searching for a simile.

Case 7.—Eczema Scroti.

Mr. M.T., aged 28, had had syphilis seven years before, and had still some faint symptoms of it about him. But he was more psoric than syphilitic, though in gereral health strong and robust. This patient was also a hay-fever subject. One of his chronic ailments was a serpiginous eczema of the scrotum, which scaled at times, and at times got moist and oozing; it involved the penis to a slight extent, and was attended with a good deal of itching.

May 5, 1904.—Scrotum, which has been better under primula obconica for some weeks, is again sore. R.—Rad. bro. 30, 24 numbered powders. numbers 1, 11 and 17, medicated with 6 globules of the remedy.

to speak of, passing very little water, and was beginning to have, with a weak heart action, a dangerous dyspnœa. Mentally she was torpid and apathetic, and it was evidently only a question of days before she would drop away. You can see that this was not a very favourable case for the action of any remedy. Treatment with *radium* was only suggested as a last resort, and with the understanding that nothing was expected beyond the mere satisfaction of knowing that everything that could be tried had been tried. But almost from the first the effect was startling. The patient died, it is true, but for some time the favourable results of the change of treatment were most interesting, and, as I say, startling. I should like to give the history of this case somewhat in detail.

"We began very carefully, because we did not know how active the radium might be upon normal tissues. The radium used was 10 mg. of pure radium bromide in a glass tube, the same tube that I have shown you already. I believe it to be of a radio-activity of over 1,000,000; at any rate, it is the highest grade of radium that I can get in the market to-day. I wrapped this small tube in cotton and that again in lead foil in such a way as to allow the end of the tube to project from the covering. I inserted this to the bottom in a glass vaginal plug, and inserted this within the vulval opening as far as it would go. For the first few treatments the exposure was five minutes every day. It was then increased to ten minutes for five treatments, when, from the action of these eight treatments the result was so marked that we gave her placebo to watch the case. These marked results were as follows :

(Third day).—"After three days' treatment the discharge from the vagina had become very profuse, and she was very much easier as to general comfort, and began to be interested in what was going on. (Sixth day).—On the sixth day she sat up in bed. She had begun to want something to eat and the dyspnœa was getting less. (Eighth day).—On the eighth day discharge was still going on, the dropsy was improving, the jaundice was disappearing, the tumour was so much less in size that there was quite a space arround it in the vagina. She was much more cheerful and in every way was much better. *She had been sleeping regularly without any opiate whatever, almost from the first, and had had a movement of the bowels quite naturally.* For a week she had placebo, during which time the favourable action continued. She was bright and cheerful and there was some slight redness beginning to appear in her cheeks. The tumour was getting less in size, and, as I say, the improvement was general. About this time we made an examination of the tumour with electric light and found the abnormal tissue covered with a white necrosis, which was continually sloughing off, sometimes in fluid, sometimes in flakes, and even in shreds. From this time on progress was continuous and of the same character, until once she got out of bed by herself, although she had to be helped in again, and the tumour finally became so small that the whole vagina was patulous and we could make out only the hardness in the body of the uterus and some small masses around the external os posteriorly, which were apparently getting less. (Twenty-first day).—On the twenty-first day this improvement began to cease. Her appetite began to get less ; the urine, which had been almost normal, increased, and she began to feel weaker again. We began to increase the dosage of radium, which we did until we were giving fifteen minutes' exposure every day ; but we could not bring back the improvement, as she gradually failed, with return of the old symptoms of dropsy, heart failure, and finally dyspnœa, and she died in a few days, dropping off very quietly from exhaustion, with no pain or discomfort, the end coming within four or five days of the cessation of improvement. We had been so surprised by the action of the radium in this case that we did not know what to expect. We hardly believed that the woman could live, and yet the improvement was so remarkable that we were almost willing to believe anything. As it was, instead of having her drop off in torpor in a few days, we kept her alive, comfortable, bright and happy for the better part of a month. And I believe that if we had had this much earlier it would have been a case of carcinoma cure; but it was too far gone, and there was not enough vitality left to carry the thing through. Several things in connection with this case I should like to note. *When we began treatment there was a small, nævus-like spot on the end of the nose, which had been increasing for some time. This, under the action of radium, apparently decreased until it disappeared altogether.* It seems to me that this must be due to some action similar to the metastatic spots that I spoke of in Goldberg's case. If this action of radium was not through the blood, how did it come about? Another characteristic result is one which I have noticed in every case where radium has been used locally. *The bowels began to move normally and continued to act as long as she lived.* The action on the dropsy and on the kidneys seemed to be similar."

Thus far Dr. Parkhurst's case strikingly illustrates the constitutional action of radium when externally applied, and it shows that the action is not merely local as is generally supposed. It fully confirms proving No. 1 in a most important detail—the disappearance of a canceroderm on the face as well as in the relaxing effect on the bowels.

CASES TREATED WITH RADIUM.

Before going on to detail my own cases I will conclude my quotations from Dr. Parkhurst by giving his. He used "radio-active water," and this is the first record I know of in which the remedy was used internally.

RADIO-ACTIVE WATER.

"I have personally used," he says, "radio-active water, or at least water which I supposed to be radio-active, inasmuch as I had exposed it for from twenty-four to forty-eight hours to the action of the radium. I administered internally in two cases, the patient taking several glasses of the water in twenty-four hours.

"*Case* 1.—*Neurasthenia, Constipation, Acne Rosacea.*

The first case was one of neurasthenia, with an undiagnosable condition in the epigastric region, with a great deal of pain about the pylorus, no tumour or other local lesion discoverable. We tried radium water in hopes of quieting the pain. She was very constipated, and we noticed that the bowels began immediately to act more regularly. Her appetite increased and the power to taste, which had been absent, gradually returned. She also reported that a catarrhal condition of the larynx improved. The most remarkable result, however, and the one for which I report this case, was the improvement in an old acne rosacea about the nose and cheeks. This condition began to clear up at once, and when we left off treatment was practically well. She took four glasses a day of the water, which was prepared by immersing the glass tube of the radium in a gallon of water for twenty-four hours. This woman had been addicted to morphine and other drugs to quiet her nerves, and, of course, that complicated the case. She had the radio-active water every day for four weeks, when I stopped treating her, because I could not see that I was doing her enough good to advise her to keep on.

Nose gets very puffed at times, though there is not so much discharge. Then mucous membrane of the throat is very dark, congested, and swollen. The aperture of the nostrils was narrowed by congestion. R., rad. brom. 30, one dose.

I did not see the patient again till December 19. Was much better after the last medicine and kept better till a week before—that is to say, for nine weeks. Feet much better; do not sweat now. Repeat.

I have seen this patient recently, and his only trouble now is excessive sebaceous secretion of the skin of the nose. The throat is much better.

These two cases bring me to another case which further develops the relation of radium to cancer. We have seen in the proving No. I., and in one of Dr. Parkhurt's cases, that superficial nævi—so called cancero-derm—have disappeared under the drug's action. No doubt millions of people have these little nævi who never develop, and never will develop, cancer. All the same, I nevertheless regard this as one point of indication of the tendency, and more especially when they are numerous. Therefore I regard their presence as one among many indications for the cancer nosodes. The fact that radium has removed them proves to my thinking a certain relation of radium to the cancer diathesis, and their presence in any case forms one indication for the exhibition of radium.

In the two last cases mentioned, and in the one now to be described, these were not noticed, but the symptoms of carcinosis were sufficient without them. Moreover, they were all young subjects, and cancerodermns do not usually appear till middle life.

Case 12.

Lieutenant H., aged 27, of the Indian Army, was invalided home early in 1907 for what was supposed to be appendicitis.

He had been perfectly well up to November, 1906. He had a splendid family history. Had been vaccinated twice, the last time in 1903, when it "took." He was inoculated for typhoid in 1900. On April 21, 1907, he was operated on by Mr. Watson Cheyne, who found a sarcomatous tumour which could not be removed. Mr. Cheyne performed enterostomy, making a new passage for the faeces, and thereby prolonging the patient's life.

The physician who attended the case with Mr. Cheyne kindly gave me the following details on October 2, 1907:—

"Mr. H. came from India with an abdominal tumour, for which Mr. Watson Cheyne operated. The condition seems to be a sarcoma growing from the wall of the small intestine, and with an extensive glandular affection. A short circuit was made between the small intestine and the transverse colon. This has acted quite well, and there has been but little gastro-intestinal disturbance. He has slight flatulence, and occasionally passes a small amount of blood *per rectum.*

"The tumour varies, but is considerably larger than it was at first. He has had injections of Coley's fluid Min. xv. twice a week, and this has definitely retarded the progress of the growth. He has, however, become more and more cachectic, especially during the last few weeks."

When I first heard of the patient he was living at Richmond, and was under the care of local medical men. As they had told the patient's father that there was no hope for him, he called on me to ask if I thought homœopathy could do anything. I said I thought that was very possible, but I should like to see the patient before saying anything definite. In the end he was brought to London and put under my care.

When I first saw Mr. H. I received a shock—I did not expect to find things so far advanced. He was dreadfully emaciated and cachectic, as described in the letter quoted above. But I, nevertheless, took him in hand, and under ornithogalum φ in unit doses, and later natrum cacodylate in ½ gr. doses three times a day, he held his own. Then came an attack of Indian fever, which ipecac. 30 successfully dealt with. Before coming under my care he had been under the influence of tinct. opii., and I did not cut this off altogether, but very small doses sufficed to relieve pain when present.

I now come to the radium episode of the case, and though it is only an episode I think it worth mentioning because there is some corroboration of it from another quarter.

On October 8, it was noted that he had had much pain in the body, so a dose of ornith. was given.

October 15. Has been feeling weaker daily. To-day, after a two hours sleep, he had violent pain. Was unable to take any lunch. Diarrhœa set in and he passed much blood. Very depressed this week. R. rad. brom. 6, globules iv. in powder, twenty-four of these, one every four hours.

October 17. Has had some bleeding at stool this morning, but not much. Pain not nearly so acute. Repeat.

October 21. No more bleeding.

This patient recently passed away—over five months after I took him in hand.

He developed intolerance of the cacodylate, and at the desire of his friends and with my concurrence he was put on violet leaf treatment, but a very severe diarrhoea developed, which was with great difficulty controlled. In fact it never was completely controlled till the end. Either with the stool, or separately from it, was purulent discharge, and at times clots.

On January 10, there was an extra amount of pain, and clots passed with discharge. Rad. brom. 6 was given in single dose. After this there was less pain and no clots. In February the diarrhoea continued uncontrolled. I followed the radium with rhus ven. 3x every two hours, and for the first time for many weeks the diarrhoea stopped, showing, as I thought, a complementary action on the part of rhus ven. and radium. The improvement unfortunately proved only temporary and the inevitable happened.

I mention this case because I saw in the *Homœopathic Recorder* of June, 1907, a note to this effect: "Dr. Pixley, of Pittsfield, Massachusetts, says that radium 6x trit. has a strong action on cancer, especially on bleeding cancer, it dries it up and alleviates the pain."

I think this is very likely and the steady cure of nose-bleeding in the young lady with the cancerous family history gives further support to this. The question of which is the best potency to use is an important one, which only expérience can decide. This is the only case in which I have used radium in any other than the 30th potency.

In reference to the three last cases there are one or two practical remarks which I should like to make. If the mother of the first two could have been treated throughout her pregnancies for the cancerous diathesis which she undoubtedly inherited—treated, I mean, more especially with cancer nosodes and other remedies like radium which are related to cancer, in all likelihood the children would have escaped the trouble for which I treated them, just as children do escape when syphilitic mothers are treated specifically during their pregnancies.

May 30.—In a week the scrotum began to improve and got practically well; to-day it has started again a little.

After this primula obconica was given; then psorinum in view of hay-fever. During the latter part of the time the scrotum got worse and on July 25 rad. bro. was repeated in a single dose, and again on August 26 and September 4. The scrotum kept well till the latter part of the time, and then other remedies were given. On December 1, radi bro. was again given, but without good result. On the 1st October following it again did good for a time. In this case the relief was only temporary.

Case 8.—*Eczema preputialis.*

Mr. J. C., aged 43, had eczema of the inner surface of the prepuce and glans and also about the anus, which gave him a good deal of annoyance. I had given him several remedies with some improvement, but not permanent. On October 28, 1907, the itching was giving a good deal of trouble, and I prescribed rad. bro., repeating it at intervals of ten days or so.

November 25, 1907.—Much better; penis better; anus nearly normal. A fortnight after receiving rad. bro. had an irritable patch on the right foot, which disappeared later. *Repeat.*

Case 9.—*Eczema perinœi.*

On March 6 last Mrs. N., aged 54, consulted me for piles, which she had had about a year, and constipation, which she had had several years. But her biggest trouble was an intolerable irritation about the anus, spreading for a considerable distance, round which was an angry area of eczema, which had been present three months. As the patient had been vaccinated four years previously, and as the vaccination "took tremendously," I put her on thuja 30 to start with. Under this all symptoms became worse, and graphites 6 given later did not improve matters.

April 4.—Bowels acting better, but irritation very bad; skin feels very dry as if baked. Irritation comes suddenly; is just as bad when the attacks are on, but is freer in the intervals. Rad. bro. 30, numbers 1 and 17, in 36 powders, one night and morning as numbered.

April 22.—Repeat. Rather better; no more medicine.

May 2.— Anus looks very much better. Patient had been constipated for two or three days, and had to use glycerine suppositories. Irritation better after that. Æscul. hip. 30, gtt. v., in wine-glass of water, morning on rising. Rad. bro. 30, numbers I and II in 24 powders, one at bedtime as numbered.

May 28.—*Anus practically well in appearance,* though at times irritable. Stools normal.

The eczema was cured: it was radium which started the cure and completed it.

CARCINOSIS.

The next two cases are those of a sister and brother, and the worst trouble of each was in the nose—internally and externally. The chief point in the family history was this: Their mother, who belongs to a well-known Jewish family (the father being English), is subject to facial acne of a very aggravated type. Her father died of cancer. Not being under my care, I have had no opportunity of trying radium in her case. The mother's acne I regard as a benign expression of the cancer taint, what I call "carcinosis." The affection in the children I consider of the same nature at another remove.

Case 10.—Erythema of face and nose with nasal catarrh.

Miss P., aged 20, was brought to me on July 3, 1907, complaining of an eruption which she had had on the nose since she was 15, that is to say, when the periods began. She was tall, well-developed, and, but for this disfigurement, a particularly handsome girl. She had had measles and whooping cough in infancy and chicken-pox after she was 15. She was unvaccinated.

The present trouble was this. She had a red shining nose, the redness invading the adjacent parts of the face. The nose burned and itched.

It was aggravated by any form of exercise, which caused her nose to bleed and made it painful. In addition to this, there was catarrh with green discharge, filling five handkerchiefs in the day. The redness was worse after meals.

The patient also suffered from painful menstruation. The periods were regular. The pains were referred to the region of the ovaries and the legs. She began to feel pain a week before. She had moist hands and feet. She had had no chilblains for two years and not severely then. She was much worse in cold weather.

I first prescribed *carcinosin* 100. This made no marked change, though there was less discharge and less bleeding than formerly at the end of a month.

July 23, 1907. R., rad. brom. 30 gl. vi. (single dose).

August 27, 1907. This time she reported a marked change.

The nose does not now bleed half as much as it used to do. It bleeds once a week, and this occurs on rising in the morning. This improvement has been observed the last fortnight. Formerly any kind of exercise would cause bleeding; this is not so now. The discharge continues, especially after tennis. Walking does not affect it. There is still itching all over the face, including the nose. Repeat.

September 26, 1907. Very much better. *Bleeding entirely stopped.* Appearance better, but gets very blue when the weather is cold. Has had much pain at the period, and the pain is worse then. *Repeat;* also *Caulophyllum 3* every hour at the period when there is pain.

October 24, 1907. Decidedly better. Cattarrh entirely ceased. Bleeding only occurs if the weather is intensely cold and she is out in it. The redness of the nose improves as the day advances. *Caulophyllum* shortened the pain of the period. Repeat.

She was kept on the remedy till December 3, when this note was made. Nose feeling much better. It is much less red and so is the face! There is no burning now; it only itches in the cold.

Case 11.—Painful Nasal Catarrh.

A. P., aged 19, in a military college. Came to me June 15, 1907, complaining of trouble with his nose. He was very tall and stoutly made, considerably over 6 feet in height, dark, rather heavy of features. He had suffered from impetigo till he was 14. He has very moist feet. In summer the feet sweat profusely and are extremely unpleasant. Is rather morbid; dreams much and talks in sleep. Not vaccinated. Is constantly getting colds in in his head. His nose is sore and cakes up. Has a burning sensation. When he plays games the nose swells. I found the nose was in a state of chronic catarrh; the throat was red and granular. He always has a sore throat and the feeling of a lump in it.

I first prescribed cadmium sulph., and on this he made considerable improvement, so I continued it till August 24. After this I did not see him till October 12, and then the condition was as follows:—

The other point is of a different kind. Why did Mr. H. contract cancer. I cannot trace that smallest sign of heredity in his case. I have seen in several cases cancer develop after ordinary blood-poisoning (from sewer gas, for example). Dr. Robert T. Cooper maintained that this was a common cause of cancer. Was there anything of that kind in this case? The only thing that I could discover was the anti-typhoid inoculation. I merely throw this out as a suggestion, and whether it be the fact or not it was the chief seat of action of the typhoid poison that the disease attacked.

Cures of cancer with radium rays were early reported. In July, 1903, Gussenbauer, of Vienna, reported a cure of a case of cancer of palate and lips in a man aged 61, who had been previously operated on and finally given up as incurable.

In 1905 Max Einhorn, of New York, reported satisfactory results of treating œsophageal cancer by means of radium contained in a hard rubber capsule and allowed to remain in contact with the structure for half an hour or an hour.

In the *Homœopathic World* of July, 1906, an important note quoted from the Paris correspondent of the *British Medical Journal* is of interest in this connection. The writer says: "It had been hoped that medicine would be able to take a signal revenge in another field. The radio-therapeutic treatment of cancerous affections at first seemed full of promise. We all know those little epitheliomas which the people, in their figurative language, call "grave yard flower," because they are generally seen on the faces of those who are nearing the end of life. A characteristic of these little tumours is to resent all familiarities, more particularly those of a surgical nature. More delicate in their action, the X-rays sometimes favourably influence these growths, and we see some disappear as by miracle after five or six carefully regulated applications. Alas! evil is always close to good, and now our enthusiasm for the new method must suffer abatement. The treatment is not always free from danger, and at a recent meeting of the Societe de Dermatologie various speakers stated that, together with instances of cure, they had seen the lymphatic glands corresponding to the region treated attacked by the disease. What, then is to be done? If the disease is left to itself the patient dies of cachexia. If not, he dies of the treatment. The only conclusion that seems warranted is that we must do our best to avoid epithelioma."

There is another possibility which does not seem to have occurred to this writer, namely, to give the remedy in a different way, by the internal method in infinitesimal doses, and this is the more important since he does not tell us how epithelioma may be avoided. The observation of the evil and the good going hand in hand is of particular interest to homoeopaths who know how to avoid the evil and choose the good. If X-rays and radium rays could not stir up cancer they could not cure it.

SCHEMA.

SYMBOLS USED.

In the subjoined schema every symptom is referred to the proving in which it occurred by a number appended to it. The sign (^{x}) means that observation is from an experiment; (^{o}) means that the symptom is a cured one.

CLINICAL USES OF RADIUM.

Acne; cancer; eczema; constipation; corns; epistaxis; erythema; hæmorrhage; hæmorrhagic cancer; nævi; neurasthenia; nose, affections of, catarrh of, redness of; prurigo; psoriasis; skin affections generally; trachoma; ulcers.

Relationships of the Remedy.

Radium bromide is controlled by rhus ven. It is followed well by rhus ven., sepia and calcarea. It compares with calcarea < in by wetting, and with carbon in < by shaving. In pruritus ani with blue light.

Symptoms move from right to left (eyes). Symptoms of ears and chest alternate with symptoms of stomach.

Schematic Arrangement of Symptoms.

Mind.—°From being torpid and apathetic became cheerful (cancer of uterus treated locally with radium).

Head.—Headache in occiput in morning; a tight feeling, worse on motion; lasted some days (2. — 2nd d.).—Much headache (3. — 3rd d.).

Eyes.—Eyes smart and look red (noticed by others). Passed off and reappeared with greater intensity later. Disappeared entirely in three weeks (1.—28th d.)—Some secretion on lashes of right eye on waking (4. — 3rd d.).—Right eye began to feel sore with occasional sticking pains and increased secretion; symptoms continued through the week, worse on reading, worse with artificial light, better on closing eyes; sclerotic vessels injected, running to cornu from both sides; occasional itching of lids, worse upper (4. — 4th d.). — Report by Dr. Macnish: "Blenorrhagia of right eye; injection of sclerotic and slight injection of lower part of cornea; slight infiltration of lower part of cornea; eye looks watery; tension same in right as in left eye; pupil of right dilates less actively than left and contracts more sluggishly" (4.—5th d.).—Woke with right eye very painful with feeling as if foreign body in it, better after going out into the air; rest of day felt it very little (4.—10th d.) —Right eye much better; left eye has had sensation as if a loose eyelash were in it on several occasions, not very painful, slight soreness of ball of left eye; a few congested vessels run over the sclerotic to cornea in left eye (4.—11th d.).—°Trachoma.

Ears.—Earache right ear (2.—34th d.).—Much pain in ear, stitching and throbbing. The ear was syringed and much wax was removed from both; the ears continued to give trouble for some hours after this, and there was deafness off and on (2.—41st d.).—Indigestion and stuffed-up feeling alternating with headache (2.—41st d.).—Throat sore, ear aching; feels as if bruised inside (2.—53rd d.).

Nose.—Much mucus in nose without having taken cold (1.—14th d.)—Pricking and peppery sensation in left nostril in evening (3.—2nd d.)—°Small naevus-like spot on end of nose which had been increasing some time disappeared (case of uterine cancer treated locally).—°Catarrh with green discharge.—°Epistaxis.—°Burning sensation in nose.

Face.—Skin of face very irritable; this gradually got worse and lasted over two months; the skin became thickened and broke in places when scratched (which gave the patient relief) exuded a clear moisture; aggravated by washing (which caused oozing); aggravated by shaving (only possible on alternate days); better by bathing in very hot water; worse at night when warm in bed; it prevented sleep, and a handkerchief had to be kept applied to absorb the exudation; though scratching relieved the intense itching it was followed by burning and stinging with oozing (rhus v. cured) (1.—45th d.). —small nævus on chin turns black, scales off and disappears (1.—88th d.).—Skin of face very dry (2.—34th d.)—Slight patchy erythema diffused over forehead (4.—5th d.).—Serpiginous ulcer on chin (5.—18th d.).—°An old acne rosacea about the nose and face (cured in two cases with radium water). °Erythema of nose and face.

Mouth.—Tongue very sore right side, about the middle (1.—16th d.).—Mouth dry in morning (2.—2nd d.).—Tongue white (2.—3rd d.).

THROAT.—Throat sore, ear aching (2.--55th d.).

APPETITE.—No appetite for lunch (2.—3rd d.—Aversion to meat; this lasted many months (2.—3rd d.).—Cannot eat bacon for breakfast (2.—4th d.).—Unable to smoke (2.—22nd d. This lasted till 46th day of proving; on 86th day prover received rhus ven. and two days later was able to eat bacon for breakfast).—Off appetite, especially for meat (3.—8th d.).—°Appetite increased and sense of taste returned. (Radium water.)

STOMACH.—Nausea (2.—4th d.).

ABDOMEN.—Inflammation of umbilicus (1)—Stuffed out feeling after food (2.—22nd d.)—Indigestion and stuffed feeling, alternating with earache or pain in the chest; (2)—Sepiginous ulcer on groin (5.—18th d.) Haemorrhage from bowels in case of sarcoma of intestines.

STOOL AND ANUS.—Stool paler than normal and more frequent (1.—14th d.).—Stools very relaxed, in loose bits, partly almost watery, darker in colour; sometimes tags of mucus; did not become normal till ten weeks later (1.—16th d.).—Bowels confined (2—23rd day).—Tendency to piles the last three weeks (2.—34th d.).—°Bowels act naturally; from the first (cancer case treated locally; previously constipated and under opiates).)—°From being constipated bowels became regular (radium water).—°Intense eczema around anus and extending to vulva, with great irritation (rad. brom. 30.)—°Bloody stools; clots in the motions (in case of cancer of intestines).

MALE GENERATIVE ORGANS.—Eruption of psoriasis on penis, with circular or serpiginous edges. (1.—4th day).—°Eczema, moist, of penis, scrotum, groins and anus cures (rad. brom. 30).—°Serpiginous eczema in syphilitic and psoric subject relieved for a time.—°Eczema in syphilitic and psoric subject relieved for a time.—°Eczema of skin and inner surface of prepuce with irritation; eczema about anus.

FEMALE GENERATIVE ORGANS.—Period delayed (2.—34th d.).—Period a week late, but not otherwise abnormal (2.—41st d.).—Period rather less painful than usual (2.—88th d.).

RESPIRATION.—Feels as if she could not get air enough (2.—3rd d.).

LARYNX AND TRACHEA.—°Catarrhal conditions of the larynx improved. (Radium water.)

CHEST.—Chest feels tight as if she could not get air enough (2.—3rd d). —An eruption has disappeared from the chest during the proving (2.—34th d.).—Pain in the chest alternates with indigestion and stuffed-up feeling.

BACK.—Pain under left scapula; increased on moving, increased by putting shoulder back, diminished after rising (1.—52nd d.).

UPPER LIMBS.—Hands cold (2.—3rd d.).—Serpiginous ulcer on hand (5).

LOWER LIMBS.—A callosity or corn on inner border of right foot, which has been there twenty years, was found to be almost gone; it disappeared completely soon after (1.—16th d.).—°A corn fell off the right foot.

SLEEP.—°Sleeps regularly without any opiate (cancer case treated locally).

FEVER.—Shivering, bilious feeling, lasting three days (1—11th d.).

GENERALITIES.—Indigestion and stuffed up feeling alternate with earache or pain in the chest (2.—41st d.).—Looked ill nearly all the time of the proving; lost 3¾ lb. in weight (2) ?—Feels very seedy as if going to be ill; as if could hardly crawl about (2.—55th d.).—Some general malaise 4.—4th d.).—Relieved pains of cancer and enabled to sleep; recovered jaundice and dropsy; restored life and cheerfulness from a state of apathy and collapse in same case. (Action of rays).—°Feels more fit.

Central nervous system (especially in young animals) very sensitive to radium; animals die of paralysis.—Red corpuscles lose their haemoglobin. —Plant growth and development checked.—Protozoa first stimulated, then die.—Regeneration retarded.—Development retarded.—Ferments lose their power.

SKIN.—Eruption of psoriasis on penis with circular or serpiginous edges. (1.—4th d.).—Skin of face very irritable; this gradually got worse; the skin became thickened and broke in places, and when scratched (which gave great relief) exuded a clear moisture; worse on washing (which caused oozing); worse by shaving (only possible alternate days); relieved by bathing in very hot water; worse at night when warm in bed, preventing sleep; scratching, though it relieved, caused burning and stinging (1.—45th d.).—Small naevus on chin turns black and falls off (1.—88th d.).—Skin of face very dry (2.—34th d.).—An eruption, which she had on the chest before taking radium, has disappeared (2.—34th d.).—Slight patchy erythema diffused on forehead (4.—5th d.).—Intense erythema which leaves a brownish pigmentation, unless ulceration follows (Roux).—In four days after exposure a red patch appeared, which became larger and increased until on 14th day there appeared a necrotic ulcer which spread in a serpiginous form. Later four other smaller ulcers appeared on the chin, on the hand, and one in the groin affecting the tissues down to the corium. These lesions broke down in a superficial sloughing ulcer, which increased for several days, and then retrograded and gradually healed, the distant lesions healing first. After three weeks the first ulcer on the arm was an atonic ulcer in process of repair. From first to last no pain, swelling, heat or fever. The ulcer was cold, necrotic and torpid (5).—°Two cases of acne rosacea of face (radium water).—°Two corns dropped off right foot.—°Eczema of scrotum and penis and axilla cured—°Prurigo worse at night (two cases).

AGGRAVATIONS.—Shaving; washing; warmth of bed (skin). Motion (headache).—Worse by reading; artificial light (eyes).

TIME.—Worse at night.

AMELIORATIONS.—Bathing in very hot water.—Scratching.—Closing eyes (eyes).—Open air (eyes).—The *Journal of the British Homœopathic Society.*—April, 1908.

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ACTION OF MEDICAMENTS.

Interesting question has been raised in France as to the action of medicaments. Dr. Huchard of the old school was the first to create the agitation. He admitted the double action of medicine, primary and secondary. Dr. Sieffert goes a step further and almost denies the double action. Dr. Clarke in his paper on Radium bromide does not acknowledge the double action of this medicine. Dr. P. Jousset on the other hand maintains the old theory of double action. The issue is, have all medicaments double action? Physicians are divided in their opinion in this matter. It is expected that there should be division until the final settlement of the issue.

The law of homœopathy is as old as the days of the sage Varadwaj, nearly four thousand years before the birth of Jesus Christ. In Charak Samhita or the exposition of the principles of medicine and the use of medicaments the following sentence occurs:

অস্মিন্নর্থে উপশয়ঃ পুনর্হেতুর্ব্যাধিবিপরীতানাং বিপরীতার্থকারিণাঞ্চৌ
যথাহারবিহারাণামুপযোগঃ সুখানুবন্ধঃ। নিদান স্থানম্, ১।৪।

Here cure means, medicine and diet applied under the laws, of Opposition to Causes, of Opposition to Diseases, and Which create Opposite Action, they result in relief.

The explanation is as follows: Opposition to causes means, if diseases are created from cold, application of heat is wanted; opposition to diseases means, in fever the use of bitter tonics; and which create opposite action means, in severe form of diarrhoea the use of purgative medicines. It is understood that the last should be in small doses. The first law illustrates the use of medicines and diet according to causes. We may call it the law of Causation. The second points to the Antipathic law, and the third the Homœopathic law.

Hippocrates, at a later time, said: "Disease is cured by the similars that produced it."

It should be said that these sages must have observed the opposite action of medicines and they came to the above conclusion. The opposite action of medicine can be nicely exemplified by thermo-electric action. A soft iron wire and a soft copper wire are twisted at one end. The other two ends are attached to the two ends of a galvanometer. If heat is applied at the twisted end and when the end has become red hot, the electric current thus generated propels the needle in the galvanometer to one direction. On heat being continuously applied, as soon as the twisted end becomes white hot, the needle in the galvanometer is repelled in the opposite direction. Analogically applied, the opposite actions of the needle shew the opposite state of medicaments. Modern science has revealed the fact that the action of medicine is ionic. The ionic state can powerfully manifest itself in small doses.

It should be said that the above facts do not establish the opposite action of medicines. They generally shew that when the physiological action can be raised to the poisonous effect, then the opposite action follows. If the dose be increased still higher, the final toxicological or fatal effect is alone produced without amelioration or without a chance of secondary manifestation. The cumulative action of moderate doses, certainly depends on emission or ejection of the medicine. When the cumulative poisonous doses are not rejected by emission, then generally toxicological effect follows. The law of contact of medicines with the corpuscles of the system is rather a far-fetched idea. If we admit the action of nervous force propagated by the neurons, then it is not necessary to acknowledge the corpuscles are directly acted on. The neurons receive the stimulus and they impart the action as they can. Immediate stoppage of heart's action from a fatal dose of a drug or from fall illustrates the action of neurons. Cumulative action due to successive contact of human corpuscles with any drug can not produce sudden termination. It can not be assumed that the fatal dose at once seizes most of the corpuscles. The rapid action of the neurons by the rarefied ions of medicine exemplifies the homœopathic law of small doses. We do not agree to call the action dynamic but we would rather mention it ionic. It is peculiar to the function of ions. It would not satisfy us to follow M. Albert Robin in saying, "The remedy acts dynamically and not by its mass." We hold that quality and quantity are sometimes necessary for perpetuating action in many cases. Repeated doses can alone do it. It would not be an all-applicable saying, to follow the precept, "The necessity of taking a very feeble dose is in order that the dynamic power of the remedy should effect its purpose, not by its quality." Quality as well as quantity is necessary for ionic action.

The question remains open whether all medicines act in opposite manner, in large and small doses. It is a positive fact that many of our minor remedies have one action. Abies canadensis, Abrotanum, Allium cepa, Allium sativum, Anatherum, Bismuthum, Blatta, etc., act well in low dilutions. They have only one action. It stands to reason, that when a drug is highly poisonous and its deathly effects can be attained it should have two actions. Cardamom, Aniseed are mild in their action even in many drops of mother tinctures, they can not be expected to possess the double action of opposition.

There is a great deal of confusion as to the application of the words *primary* and *secondary* actions. In section 63 of the

Organon, Hahnemann writes: "Every agent that acts upon the vitality, every medicine produces more or less change in the vital force, and causes a certain alteration in the health of the individual for a longer or a shorter period. This is termed *primary action.* Although a product of the medicinal and vital force endeavours to oppose its own energy. This reaction belongs to our preserving vital force, of which it is an automatic action and it is termed *secondary action or counter-action.*" In section 64, he says as an explanation to the above: "During the primary action of the artificial morbific potencies (medicines) on our healthy body, our vital force seems to conduct itself merely in a susceptible (receptive, as it were passive) manner, and appears, so to say, compelled to permit the impressions of the artificial power acting from without, to take place in it, and thereby alter its state of health; it then, however, appears to rouse itself again to action and to develope (a), the exact opposite condition (*counter-action, secondary action*) to this effect produced upon it (*the primary action*), if there is an opposite to it, and that in as a great degree as was the effect (primary action) of the artificial morbific or medicinal potency on it, and in proportion to its own energy; or (b), when there is not in nature a state exactly the opposite of the primary action, it appears to endeavour to recover its lost balance, that is to make its superior power available in the extinction of the change wrought in it from without (by the medicine), in the place of which it substitutes its normal state (*secondary action; curative action*)."

It will be seen that Hahnemann admits that there is a state of nature when not capable of reaction, it calmly settles down to recover its lost balance. The state of nature, perhaps, can only come on from two causes; any poisonous dose may postpone counter-irritation for a time, but it is again regained. When there is no violence in primary action then no reaction follows. In a fatal action, there remains no time for counter-action. Otherwise, nature in the system will have produced that action. It follows that in all medicines and at all times counter-action does not ensue.

So far with the primary action. Confusion may arise as to the application of the two terms. Difficulty may take place from various ways. In section 66, he says: "An obvious antagonistic action, however, is, as may readily be conceived, not to be noticed from the action of quite minute homœopathic doses of the deranging potenices on the healthy body. A small dose of every one of them certainly produces a primary action that is perceptible to a sufficiently attentive observer; but the living organism employs against it only so much counter-action (secondary action) as is necessary for the restoration of the normal condition."

After all, are we to admit that there is counter or secondary action in small minute homœopathic doses? As far as we see, there is only one action. It is the first action, as the second is not known to ensue. In disease, the primary action of the small dose as a stimulus acts contrary to the disease, and thus health is restored. At any rate, we can not admit that there is secondary action in this state. But continuous small doses by their cumulative action may produce counter-action. We can, then, only know that no more of that medicine will be tolerated, or the system will not bear any more even of that homœopathic medicine. Be that as it may, the inevitable conclusion is that primary action is not always followed by secondary action. In large doses of poisonous medicine, reaction generally follows, but not with regard to small doses, unless they gain their cumulative effect. Taking into consideration all these facts, we can safely conclude that *primary action* may mean several things. In the case of toxicological or deathly effects, the *primary action is destructive.* In poisonous doses, that which do not cause death, *reaction may be salutary.* But this, again, depends on the rapid elimination of the drug. Unless the poisonous drug is rapidly emitted, there is danger of ensuing a chronic course which may not be favourable to the patient. In the third case, when the dose is minutely small, *reaction does not follow,* unless the doses have a cumulative action. The primary action then proves *curative.*

For these reasons, we think, primary and secondary actions can not definitely fix any certain state of action of drugs or medicines. We can not at any rate precisely limit the action of any medicine by these terms.

As to the pretension of Dr. Huchard to derive his resources from Hippocrates. It is clear from his lecture that he derived more knowledge from Hahnemann than from Hippocrates, though he is reluctant to admit it. His use of *digitaline,* two to four drops of the thousandth solution, was pointed out by Dr. Sieffert, "That dose corresponds to the third decimal solution of our pharmacopoeia, and we employ voluntarily, doses stronger than yours." This was the last straw which broke the camel's back. Dr. Huchard could not tolerate it any more. Being intolerant himself, he begins with the homily of toleration in medicine. With this declaration of toleration, there is a latent intolerant spirit. He assigns an unlimited period by which truth should be accepted. It can not be immediate, ages must elapse before it can have its full light. He supports the fact by quotations:

"Truth requires much time to overcome the mind, it is never victorious until it shows itself," said the aged Fontanelle; even the circulation of the blood itself had, for a long time, its detractors, among whom was Riolan, who exclaimed, "I had rather err with Galen than believe with Harvey."

Dr. Huchard was with Riolan in believing Hippocrates, Trousseau, and others, but not Hahnemann. His effort was to prove that the action of small doses has been recognised by other authorities, not of the homœopathic school. As all good physicians are now associating the action of homœopathic medicines with the ions they contain, Dr. Huchard at once jumps to the conclusion that the ancients had that knowledge. He says: "The ions are the molecules that biological or physical forces, like electricity, have liberated from their combinations. The liberated ions have exalted affinities that the ancients had seen when they spoke of bodies in the nascent state." We do not know when ions mix up and liberate themselves, and under what conditions. A mass of any metal or non-metal is not in its ionic state. His statement is really revelation to us. All we can say is that Dr. Huchard should have been more careful in his study of ions. Has he ever seen any experiment of gaseous ions to combine and then to dissociate? He arrives at a sudden conclusion perhaps from his intuition.

Dr. Huchard takes shelter of Dr. Albert Robin in using infinitesimal dilutions. According to Robin "therapeutics should attempt to influence the functions if they wish to modify the organs." May we ask, does he know that physicians do not follow it in their method? Indeed this is a new discovery. It is evident, these pseudo-homoeopaths are creating a new school to make themselves famous. For their ignorance, they can not stand alone and must have to mix either with the homoeopathic practitioners sooner or later on they shall call themselves eclectics.

In order to refute his idea of infinitesimal dilutions, Dr. August Schepens wrote in the *Journal Belge d' Homœopathie* thus:

"The dissociation of light rays by Finsen with the aim of developing their curative action, by isolating the red rays for the treatment of variola and erysipelas, and the violet and the ultra-violet for the treatment of lupus, have contributed not a little credit to the proceedings of our school, which dilutes its medicines to the point of fracturing the molecules and even changing them into ions.

And is it not also an infinitesimal quantity of medical substance that passes through a diseased organ by the process of ionisation? That is to say, in moistening the two electrodes of the constant current by a solution of the drug, and applying these electrodes to two opposed points of the suffering part. No balance can indicate the quantity of matter thus withdrawn from the solution; and yet it appears that these infinitesimal quantities act.

All these facts are very suggestive. Apparently they should open the eyes of all those who wish to see.

Unfortunately, the kickers are not wanting; in our own days there are the Riolans who prefer to err with Galen than to be a 'circulator' with Harvey.

These voluntary blind ones are often the intolerant ones. I know, and many know it as well as I do, that Professor Denys, of Louvain, is treated as a charlatan by his colleagues because he teaches that the cure of tubercular affections may be made by filtered bouillon of Koch's bacillus, in commencing the treatment by infinitesimal doses, the seventh, eighth, and even ninth decimal!"

Dr. Schepens thus ably defends Hahnemann: "Thus the law of similitude was certainly formulated before Hahnemann by Hippocrates, Paracelsus and Stahl [and acknowledged by Hahnemann, note by translator], but Hahnemann alone knew how to accord to it all its value and the importance it merited in making it the basis of a new therapy."

As to the remark of Dr. Huchard on dilutions, he writes: "Dr. Huchard is mistaken when he advances that the thirtieth centesimal dilutions are inactive. All homoeopaths know by experience that that is false. The proof, moreover, has been furnished in the laboratory of the Hospital St. Jacques, by Dr. Jousset, for the *nitrate of silver* and *corrosive sublimate.* The experiments are to be found in the Bulletin of the Biological Society, 1903, p. 942."

It is curious that when homoeopathy is generally preferred for minute symptoms, Dr. Huchard finds fault with it for that reason. Here is the able reply of Dr. Schepens:

"Dr. Huchard reproaches homoeopathy also with being too minute and of attaching too much importance, symptomatically, to slight deviations from the normal state.

Every homoeopath who has practised a few years knows that this reproach should not have been made, for the good reason that many times the small symptom is a precious indication for the remedy. The following examples will place this in evidence.

I receive from time to time the visit of a mother who comes for her daughter's case. The latter is haunted by a mania for suicide by hanging. Never has she attemped any other kind of ending her existence. The impulse to this kind of suicide is found in the pathogenesis of *arsenicum,* and a few doses of *arsenicum,* 12th centesimal, delivers the patient for several months from this terrible obsession.

A lady said to me: 'If I were not religious I would end my life.' I asked her what means she would employ to do so. 'I would throw myself from a window,' she replied. In the pathogenesis of *nux vomica* it is related that a person under the influence of the drug jumped out of a window; as my patient presented some other symptoms of *nux,* I administered the remedy, with the satisfying results.

Another lady attacked by Jacksonian epilepsy had been treated with *bromide of potash* by an allopathic *confrère.* The seizures were very little influenced by this medication and, besides, there appeared many disquieting symptoms; this lady could not remain at home, she had an irresistible desire to go to the country. In crossing a railroad track she was suddenly seized with a suicidal mania, and she had to struggle terribly against the impulse to throw herself under a train. These symptoms disappeared upon the cessation of the *bromide.* Well, if some day that person were haunted by this same mania for some other cause, I would not think for an instant of giving her *arsenicum, nux* or *aurum,* or any other remedy reputed to serve in a like case, but I would give her an infinitesimal and imponderable dose of *bromide of potash,* with much hope of succeeding. A thousand times no, the minutiae of homoeopathy are not superfluous; on the contrary, they are desirable."

DYSENTERY.

(Continued from page 191.)

Cuprum Metallicum. *Stools.* Bloody, slimy, brown, then greenish with streaks of blood. Profuse, with tenesmus. Of bloody mucus. Of almost clear bright red blood. Bright blood from bowels. Scanty, mucous, brownish, afterwards greenish, next day streaked with blood. Scanty, mucous, greenish, preceded and followed by griping and tenesmus after stool. *Painful, green, with cutting and tenesmus.* Frequent. Involuntary. Frequent and small, bilious, with burning and tenesmus. Slimy, tinged with blood, and on straining shreds of lymph and frothy ash-coloured secretions were forced out, aggravating the sufferings. *Before stool.* Griping. *After stool.* Griping. Tenesmus.

Rectum and Anus. Rectum inflamed and sensitive. Heaviness of the rectum after stool, with uneasiness. Tickling as from pin-worms. Tenesmus after stool. Bleeding of hæmorrhoidal tumours.

Accompaniments. Audible gurgling of drink. Nausea. Retching ineffectual, with constriction of oesophagus and across chest in direction of diaphragm. Vomiting. Vomiting with burning nausea rising to throat. Vomiting better from drinking cold water. *Frequent vomiting after drinking (Ars.). Cramps and pains in stomach and bowels. Griping and pressure then vomiting. Pressure in stomach, with intermittent contractive pains.* Abdomen tense hot and tender to touch (Bell.). Spasmodic motions of muscles of the abdomen. Colic. Most horrible colic, with tendency to collapse. Convulsive vomiting, hiccup, etc.

Remarks. It is not known whether Cuprum has been used in cases of dysentery. Be that as it may, the indications of its administration are distinct. Painful green mucous stools, with cutting and tenesmus point to its use. Horrible colic as a precursor to dysentery or coming on just before dysenteric stool is another indication. Colocynth is generally used in such cases. On the failure of Colocynth, Cuprum should have a place. Vomiting and cramps in stomach and bowels may or not accompany the symptoms.

DIOSCOREA. *Stool.* Involuntary discharge of mucus. Slimy. White, like the white of an egg, but lumpy with straining and burning, in rectum and *sensation as if the stool was hot.* Stools dark green and mucous. Dysenteric stools early morning, driving out of bed. Tenesmus. *Before stool.* Urging. Colic. Severe pain in sacral region and bowels, of a writhing drawing character; the pains radiate upwards and downwards, until the whole body and extremities became involved in spasm. *During stool.* Fainting. Severe pain in sacral region and bowels, of a writhing drawing character; the pains radiate upwards and downwards until the whole body and extremities became involved in spasm. Shuddering. Severe tenesmus. Burning in urethra. *After stool.* Prolapsus ani; weak, faint feeling in abdomen; colic. Chill.

Rectum and Anus. Spasmodic pain in bowels, with unusually severe tenesmus. Burning pain in rectum. Cutting extending from umbilical region to rectum, with shuddering during stool. *Hæmorrhoids like red cherries protrude after stool, with pain in anus.* Hæmorrhoids partially prolapsed and sore. Sharp pain from hæmorrhoid to region of liver. Hæmorrhoids look like bunches of grapes, with great pain and distress.

Accompaniments. Cramping pain in pit of stomach, then eructations of wind, then hiccup and emission of flatus. Sharp pain in epigastrium. Pain in epigastrium better from eructations of sour bitter wind. Feels better from empty eructations, had to unfasten clothes. Dyspepsia of a flatulent character, resulting from tea. Flatulent dyspepsia, with belching of large quantities of offensive gas, partially relieving the pain in stomach and abdomen. Neuralgia of the stomach most severe, pain even along sternum and extending into both arms, with cold clammy sweat, etc. *Rumbling in abdomen (Puls. Mag.,) with emission of much flatulence.* Griping (Coloc., Puls., Sulph.). Emission of much flatus, with frequent cutting in stomach and small intestines. Soreness in abdomen on pressure, with eructations. Pain in region of gall bladder. Heavy grinding in region of liver. Distress in hypogastric regions, with intermittent cutting in stomach and small intestines (Colc., Gamb.). Most violent flatulent colic generally better from walking about, worse from lying at night, the pains are generally cutting, twisting, better from pressure (like Coloc.), but they generally radiate from abdomen to back, into chest and arms, etc. Severe twisting colic with intervals of relief.

Remarks. Like Colocynth, Dioscorea is a medicine for dysentery with cutting colic in the abdomen and small intestines. Colocynth involves the stomach, small intestines as well as the large intestines. Both of them have the relieving character by pressure. Dioscorea is more neuralgic than Colocynth. The Colocynth pain is better from doubling up, but that symptom is not recorded in Dioscorea. On the other hand, Dioscorea involves the liver and gall bladder which Colocynth does not. There is more relief in Dioscorea from passing flatus than in Colocynth. The colic of Dioscorea is essentially flatulent and the intolerance of pain creates the nervousness. Colocynth allows more organic inflammation than any one of them. The significance of colic is the keynote for using these medicines in dysentery. Both Colocynth and Dioscorea have mucous bloody stool. The mucus is generally white transparent, jelly-like. But in Cuprum greenish mucus prevails. Dioscorea like Sulphur has the sensation as if the stool was hot.

DULCAMARA. *Stools.* Mucous, green or changeable, of sour odour, with general dry heat of skin. Dysentery always from cold, wet weather. Slimy, mucous. Bloody. Chronic bloody dysentery, with biting at anus, Sanguinous diarrhoea, with itching in anus, and prolapsus of the rectum.

Rectum and Anus. Pressing before usual stool. Desire for stool in evening, with griping in hypogastrium. Biting at anus. Itching in anus. Prolapsus of rectum.

Accompaniments. Aversion to food. Eructations. Nausea. Vomiting. Colic as after taking cold; as before diarrhoea; as before stool, with rumbling and pain in small of back.

Remarks. Dulcamara is sometimes used in dysentery, in acute or chronic cases with mucus and blood. In chronic cases, it is mostly applicable to the amœbic variety. One leading character is the aggravation in cold, wet weather and from being drenched in rain.

Elaps. *Stools.* Blackish, watery with mucus and rumbling. Bloody mucus. Discharge of black, liquid blood from bowels and at stool, with colic and sensation as if bowels were twisted. Constriction of sphincter, after bloody stool.

Rectum and Anus. Prolapsus ani. Crawling at anus as if from worms.

Accompaniments. Vomiting of bile, followed by dysentery. Vomiting of mucus with fainting. Fruit and cold drinks feel like ice in the stomach. Weight in stomach, with nausea, after eating. Colic with urging to stool. Intestines twisted, as if by a cord, and stung together in a knot, with strangulating sensation. Sensation as if blood in abdomen were flowing backward.

Remarks. Elaps is the poison of the Brazilian Coral snake. In respect to its poisonous property, it is less powerful than Crotalus. Blackish stool or black, liquid blood from the bowels is the principal character. It has a strangulating sensation in the intestines.

Elaterium. *Stools.* Dark, green, mucous stool, in masses mixed with whitish mucus streaked with blood.

Rectum and Anus. Bleeding of hæmorrhoids. Soreness of anus.

Accompaniments. Nausea. Vomiting of watery substance, or of greenish, bilious matter, with great weakness.

Remarks. Elaterium can only be used in green mucous stools streaked with blood. In this character it resembles Chamomilla or Ipecac.

Erigeron. *Stools.* Small, streaked with blood, accompanied with tormina. Dysentery, with burning in any part of the alimentary canal. Extreme tenesmus, with frequent small stools, streaked with blood or bloody, and great irritation of urinary organs. Hard lumps of faeces are sometimes mixed with the discharges. Mushy stool.

Rectum and Anus. Natural stool, followed by severe neuralgia in anus with tenesmus. Burning in bowels and rectum. Haemorrhage from bowels. Haemorrhoids bleeding. Burning in margin of anus; it feels as if torn.

Accompaniments. Violent retching and burning in the stomach with vomiting of blood. Sharp cutting pain in epigastric region. Frequent dull pain in umbilical region, with a feeling in anus as if it had been torn. Frequent distress in umbilicus with hard, aching distress in whole dorsal region.

Remarks. Erigeron has small stools streaked with blood, tormina, burning in the bowels and rectum. The few symptoms with dysenteric stools form its character.

EUCALYPTUS. *Stools.* Chronic dysentery, mucous and bloody. Dysentery, with heat in rectum, tenesmus, discharge of mucus, great prostration. Hæmorrhage. Diarrhœa or dysentery in typhoid fever. Fetor of stools and flatus.

Rectum and Anus. Sharp aching in lower bowels. Heat in rectum. Tenesmus.

Accompaniments. Burning in epigastrium and umbilical regions. Flatulent distension of abdomen.

Remarks. Eucalyptus should be used in chronic cases of dysentery, mostly of the amœbic variety. Its indications are the chronic course, with heat in rectum and tenesmus.

EUONYMUS EUROPŒA. *Stools.* Stools are at first diarrhœic, and eventually turn in to bloody. Involuntary evacuations of bloody mucus. A case of poisoning has been recorded by Allen : "A man, forty three, took eighteen seeds one morning, and as many the following evening. He was seized with frightful abdominal pain, profuse diarrhoea, eventually bloody. He was not seen till the evening, when he was in a state of profound collapse, with involuntary evacuations of blood and mucus. On lifting him up tetanic convulsions were induced which immediately preceded death."

Accompaniments. Nausea, vomiting and diarrhoea. Violent shootings in the region of epigastrium. Cuttings and constrictions in abdomen as if it would be cut off below ribs. Abdominal pains are worse after a meal.

Remarks. Euonymus Europoea has a remarkable place in dysentery, where the flux begins with diarrhoea and ends in violent dysentery. Terrible cuttings and constrictions in the abdomen, as if it would be cut off below the ribs is a leading symptom.

(To be continued),

REVIEW.

The Enthusiasm of Homœopathy with the story of a great enthusiast. By John H. Clarke, M. D. Homœopthic Publishing Co., 12 Warwick Lane, London, E. C. 1907.

This little book is a reprint of the presidential address of the author delivered in October 1906, before the British Homœopathic Society and first published in the Journal of that Society in January 1907. We have nothing but all praise for the author who is a sincere and earnest Homœopath and who is in his own language a "whole hogger."

The object of the author "to give the address a separate existence" is that "it may possibly interest a wider circle of readers than the Society's journal can reach." We hope the object has been greatly fulfilled. The style of the author is inimitable and Dr. Alfred Edward Hawkes has enough reasons to be proud of such a child as our present author who looks upon Dr. Hawkes as his godfather in Homœopathy.

Dr. Clarke is perfectly right when he says that " when I took my first timid peeps into Homœopathy, I had a notion at the back of my mind that I should soon be able to find out and appropriate all the good there was in it, and that I need not necessarily separate myself from the body of the profession, if I decided to make use of it. But that notion was pretty soon knocked out of me. I found in it very much more than I anticipated and I found this in addition, that if I was to make anything at all out of it, I must *devote my life* to it, and associate myself with others who did the same. In short, there was no help for it, I must go the whole hog or none." This is a sincere confession of an earnest and sincere worker. But it is our misfortune not to find many such sincere workers in the field of medicine. The object, both primary and secondary, now-a-days with all medical men, is anyhow to earn money. But we know that if we are sincere in our object heaven will provide us with our necessaries. Like Dr. John Mure, upon whose enthusiasm this address was based, here our land saw some forty years ago a great enthusiast, who once an open enemy of Homœopathy, became after reading Morgan's Philosophy of Homœopathy and seeing some cases of cure with his own eyes, an earnest advocate and staunch supporter of Homœopathy. Such a man was no other than the late Dr. Mahendra Lal Sircar, the founder of this Journal and an M.D. of the Calcutta University where the orthodox school of medicine is still in its highest ascendancy. Persecution knew no bounds and professional ostracism was at work. But he remained unmoved and said that "we must not live by bread alone but by every word that proceedeth out of the mouth of God." The result of such sincerity and earnestness was unparallelled success.

Whenever there was a fight between Homœopathy and Allopathy, Homœopathy always gained the ground. The orthodox medical men have not opened their eyes yet with as much sincerity as they should, though stealthily they are incorporating many of our drugs into their Materia Medica. The blame lies all the more with the Government because they are guided more by the prejudice, bias and dogmatism of the old School than by the reason and judgment based upon solid facts and figures. The dose question and the multiplicity of medicine in a prescription has been greatly modified after the brilliant victory of Homœopathy by single medinines and with infinitesimal quantity.

The argument of some of the gross Philistines of the Old School profession, besides the principle of Homœopathy which they can not accept, is that no chemical test of medicines can be found beyond certain attenuation and hence their medicinal values are doubtful; but such men would not hesitate to doubt the efficacy of a bichloride of mercury lotion 1 in 100,000 which is equivalent to our fifth dilution.

Dr. Clarke is very right when he exclaims that "now that the air is thick with Royal Charters, is there, I ask, any reason why our Society should not have what is surely its due, and become the 'Royal' or 'Imperial' Homœopathic Society"? It is high time that Government should take notice of the utterances of men like Dr. Clarke who are themselves honourable and highly erudite men of science and letters and who, but for their right judgment in adopting Homœopathy, would have been considered as men of genius and talent.

The orthodox school should take heed and should not forget that "evolution is on their track and if they do not move onward and cast off their chains in time, it will crush them and their chains together."

DR. CLARKE's enthusiasm of Homœopathy is noble and praiseworthy throughout. He sees the immutable law of cure in Homœopathy and thus he says, "In my admiration of Hahnemann, and in my gratitude to him, I yield to none; but Homœopathy is greater than Hahnemann: Hahnemann discovered and revealed its laws, but he did not make its laws, and it existed in the nature of things before he or our world was born". And again, "The worship of Hahnemann is not the religion of this Society, but the enthusiam of Homœopathy is and the more complete our devotion, the more fiery our zeal, the greater is the glory we render to our leader and benefactor."

There is no compromise with truth. When we are once animated with truth we can never brook the idea of being insulted or assaulted from any quarter. The allopaths do on many occasions take undue indulgence in vilifying homœopathy and Dr. Clarke with his natural flow cogently comes forward to meet such vilification. He says, "Individually, allopaths are, no doubt, jolly good fellows, like the rest of us; but the allopathic body as such claims no allegiance and no respect from us. The profession is one thing, the allopathic sect is another. We are as much 'the profession' as they, and are just as much entitled to make rules as they are, and just as little entitled to impose rules of our making on them as they are to impose their rules on us.

"Our business is to go on our own way absolutely regardless of any thing they may think, or do, or say—to treat them in short, in exactly the same way as they treat us. If they presume to talk to us about manners, or ethics or etiquette, we can reply that when their representative journals and societies freely welcome our communications we will listen to any thing they may have to say about manners—but not before. We will not promise, even then, to accept their suggestions; but until they alter their own behaviour towards us, they are simply out of court.

"As to what they say about our practice—there, again, they are quite out of court. There have been members of our Society who have thought it necessary to apologise to allopaths for using some of the remedies we use, such, for instance, as *lachesis* and *psorinum*. Others have apologised for using high potencies, and have sought to justify themselves by the discoveries of chemists and physicists of the powers of infinitesimal quantities. Now, this is all wrong. Homœopaths owe no allegiance to allopaths. Homœopathy is established science. Allopathy is established nescience. The sight of Homœopathy paying court to allopathy—of homœopaths paying court to allopaths is to me sickening to the extreme. It is light paying court to darkness; truth paying court to error; virtue paying court to vice. One blast of enthusiasm of Homœopathy should be enough to cremate such infamy from our midst." This is real love for *Truth.*

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

For the Month of May, 1908.

Date.	Barometer. (corrected.)	WIND.		TEMPERATURE.		Humidity.	CLOUD.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·736	S E	7·5	99·5	83·0	64	1	*Nil*
2	29·765	S E	7.5	98·5	82·5	63	*Nil*	"
3	29·755	S	6·2	97·0	78·5	70	3	0·90
4	29·749	S	7·0	97·5	78·5	62	*Nil*	*Nil*
5	29·719	S E	6·1	98·8	83·0	60	5	"
6	29·733	E	5·6	101·0	79·0	85	7	0·02
7	29·775	S	6·4	87·8	75·8	87	8	0·12
8	29·724	E	3·7	85·2	78·0	74	2	0·22
9	29·615	S	5·1	95·0	78·2	67	2	*Nil*
10	29·694	S	3·4	92·0	77·0	91	8	0·81
11	29·738	S E	3·7	97·5	70·0	72	*Nil*	0·41
12	29·713	N	3·8	96·0	76·0	61	7	0·07
13	29·685	S E	2·2	95·0	82·0	64	4	*Nil*
14	29·683	N	2·8	99·5	82·0	43	6	"
15	29·678	W N W	1·9	100·0	81·0	53	10	"
16	29·696	S S W	3·0	101·0	82·5	67	*Nil*	"
17	29·761	S	5·2	102·8	83·0	67	4	"
18	29·709	S	5·0	101·0	82·5	67	4	"
19	29·726	S	6·6	99·0	83·0	64	4	"
20	29·772	S	6·5	99·0	84·0	66	3	"
21	29·787	S	5·9	100·0	84·0	65	7	"
22	29·697	S	6·0	100·0	84·0	61	6	"
23	29·619	S	6·6	100·2	83·0	69	6	"
24	29·715	S	6·2	102·0	75·5	69	9	0·55
25	29·744	S	5·3	96·0	76·5	69	5	0·41
26	29·641	S	6·1	94·8	75·0	74	8	*Nil*
27	29·601	S E	7·3	96·0	79·5	79	10	0·01
28	29·572	S	4·1	94·8	83·5	86	9	*Nil*
29	29·568	S	2·7	99·5	71·0	74	*Nil*	2·07
30	29·589	Calm	2·8	98·0	74·0	86	8	0·97
31	29·583	S E	2·9	96·0	83·5	80	9	*Nil*
Mean	29·664	68°S 17°E	5·0	96·8	79·7	70	5	TOTAL 6·56

The gradual fall of barometer is a striking feature. The mean atmospheric pressure in January had been 30·070; In February

29·935; March 29·841; April 29·730 and in May it was 29·664. The mean direction of wind during May was S.E. The mean velocity of wind per hour 5 miles. The mean maximum temperature 96·8 and the mean minimum 79·7, shewing the difference of 17·1 degrees. The mean humidity 70 per cent. The rainfall came to 6·56 inches during the month. The heaviest was on the 29th. Rain began from the 3rd and was almost continuous.

During the week ending the 25th April, the highest number of deaths from cholera numbering 314 was registered. In the week ending the 2nd May, the mortality was 230. In the week ending the 9th May, it was 164. In the week ending the 16th, it was 109. In the week ending the 23rd, 71, and in the week ending the 30th, 81. We notice the gradual decline, though the last was slightly higher than the previous week. The noticeable feature in the occurrence of cholera is the gradual rise from February to April and the decline in May. The fortunate circumstance is that it declined after all. The misfortune is that Kalighat forms the centre of all bathing places in Bengal during any Jog. The Purans and Tantras have multiplied their number to such an extent that they come as an infliction on the orthodox Hindus. The higher Shastras disregard them. The lower create an unparalleled mischief.

Plague shewed willingness to gradual decline during the month and the mortality was much less than that of the last month. In the week ending the 25th April, the mortality was 90. In the week ending the 2nd May, it was 73. In the week ending the 9th, 84. In the week ending the 16th, 69. In the week ending the 23rd, 79. During the week ending the 30th May, the mortality suddenly declined to 60.

Smallpox was also shewing signs of decline. In the week ending the 25th April, the mortality was 22. In the week ending the 2nd May, it was 15. In the week ending the 9th, 16. In the week ending the 16th, 16. In the week ending the 23rd, 12 and in the week ending the 30th May, the mortality rose to 20.

Mortality from fevers did not manifest signs of decline. In the last two weeks of April 18th and 25th, the mortality suddenly rose to 112 and 114 respectively. In the week ending the 2nd May, it was 118. In the week ending the 9th, 94. In the week ending the 16th, 91. In the week ending the 23rd, the mortality rose to 114 and in the week ending the 30th May, it was 104. It might have been that the first commencement of rain gave an impetus for the fevers to rise. Fevers are the greatest scourge of Bengal.

Bowel-complaints gave rather less mortality, in comparison to that of the last month. It oscillated between 69 and 30. The highest was in the week ending 2nd May, and the last during the week ending the 30th May.

During the above mentioned five weeks, the respective mortality was 759,631,601,570 and 523, making a total of 3084, during the period. The ratio of deaths per thousand population during that time was 37·8. It was less than that of March and April, of which the ratio was 47·67 and 51·92 respectively. Cholera and plague were on the decline. Fevers were not shewing any signs of abatement.

EDITOR'S NOTES.

A New Supply of Lachesis.

The following good news has been circulated by the *North American Journal of Homœopathy* June, 1908 :

" On April 19 there arrived in this country live specimen of the *lachesis trigonocephalus,* caught in Brazil, and consigned to a well-known firm of homœopathic pharmacists. The snake was imported for the purpose of extracting the poison and using it as a new source of supply. The reptile was exhibited at the Academy of Pathological Science at its meeting of April 24. On Sunday, April 26, the venom was extracted at the New York Zoological Garden by Dr. Ditmars, curator of the reptile department, and Mr. Snyder, his assistant, in the presence of a number of physicians and newspaper men. The latter were responsible for a number of weird stories in the press. The snake has been declared to be a true specimen of the *lachesis trigonocephalus,* or lance-headed viper, by Dr. Ditmars, the curator of the reptile department at the Zoo. This is the identical species used by Hering in the original proving of lachesis."

We only wish that they are real species of Lachesis Trigonocephalus. The want of Lachesis poison in sufficient quantity is keenly felt by the homœopathic profession. Hering introduced the poison on July 28, 1828, and since then difference of opinion in the identification of the serpent was baffling the attempt of the American Chemists to procure its poison. It would be our good luck if true species of the serpent have been secured after the lapse of eighty years.

An Order.

The following interesting poem comes from the *Medical Counselor* for May:

"Prof. Flexner intimates that as a result of experimental surgery in transplanting the tissues and arteries of animals, man may hope some day to have surgeons who will fit him out with a new heart.—Daily Paper.

Dear Doctor Flexner, it is true that you can take a heart.
And fix it up as good as new in each and every part?
Or, if perchance it's weak and cold at is the Arctic snow,
That you can make it strong and bold, and full of youthful glow?
I ask for I've a battered thing that does me for the same.
For years I've worn it in a sling, and found it pretty tame.
It had a knock when it was young that cracked it near the top—
The time when Susan's charm I sung, who wed Bill Vanderpop.
Along the base a fracture lies that's pretty deep and wide—
I don't exactly know its size, I seldom look inside.
It happened back in eighty-nine, when Kitty Brown, the minx,
Who'd promised that she would be mine, eloped with Tommy Binks.
Around the left hand upper curve you'll note a horrid dent.
It put a puncture in my nerve of horrible extent.
That dimple's all that's left to me of dear Matilda Waggs,
Who won my heart in ninety-three, but married Money bags.
There's sundry other chips and knicks in sundry other spots,
Reminders of Virginia Hicks and fair Maria Shotts,
Of prudence, Chloe—oh, a score of maidens full of wit,
Who in the year of ninety-four played basket ball with it.
And if, again you'll take a glance within this organ scarred,
You'll see a gloomy, bleak expanse of ruin, smoked and charred.
The dancing flames that year by year have had their play all through,
Have scorched and burnt it till 'tis seer in damper, grate, and flue.
Now I know not if you can fix, or place in good repair,
A heart subjected to such tricks, and so much heated air.
If not a new one send—your best, sure proof against the wiles
Of modern maids—I would suggest steel-clad, and lined with tiles."

Though nothing is impossible now-a-days, still "There is many a slip between the cup and the lip." Compte prophesied that man will be able to create man by the help of science. The writer of the poem consistently rebukes the idea that a heart may be replaced but not the feelings. Now, we hear of the word "Superman" as a human being who will be much superior to the present generation of man created by the process of culture and artificial selection. "Superman" approximates the idea of সো ঽ হং or I am the supreme being. Such a state of attainment by evolution may or may not be possible, but artificial engrafting of organs is still more doubtful. The one comes from a natural process by artificial selection which takes the natural character, the other is a partial replacement, by artificial means, which retains its artificial combination.

The Campaign against Malaria in the Duars.

The *Lancet*, of July 18, writes :

"The Duars are a series of valleys lying along the south base of the Eastern Himalays in which the prominent industry is tea planting. The comfort of those engaged in the gardens, and incidentally their profits, have always suffered severely from the attacks of malaria which is very prevalent in the district. Six medical officers in charge of the health of the Duars—namely, Dr. W. Brown, Dr. O. E. McCutcheon, Dr. C. A. Stone, Dr. S. Ducat, Dr. U. A. Knyvett-Hoff, and Mr. G. E. Anderson—have accordingly collaborated in the production of a nine page folio pamphlet bearing the title "Practical Methods of Anti-Malarial Sanitation," intended for distribution amongst the residents of their district. A copy of this pamphlet has been forwarded to us and it constitutes an admirable summary of the present-day methods of dealing with malaria in accordance with principles resting upon established facts. Although there is nothing new in them to a medical reader the statements are so clearly set out as to appeal convincingly to any intelligent planter. They first speak of the agency of the mosquito in spreading the disease and then consider the methods of meeting it under the five heads of (*a*) destruction of the parasites; (*b*) destruction of the mosquitoes which carry the parasites; (*c*) protection of human beings against mosquito bites; (*d*) separation of infected persons from uninfected; and (*e*) warding off of the bad effects of mosquito bites. Under (*a*) and (*e*) the question of quinine is fully considered, daily prophylactic doses of five grains being strongly advised. The writers insist on the necessity of similar treatment for the natives at the hands of a "trustworthy doctor babu" acting under the supervision of the European medical officer. Under (c) the question of adequate mosquito screens and nets is considered, and (*d*) enjoins the segregation of coolies in their own lines and, if possible, separation of garden-born coolies from workers imported from the hills who are found to be more susceptible to malaria. But the most important place in prophylaxis is given to 'co-operative activity in destroying mosquitoes in their breeding-places by clearing jungle, draining and filling up pools, and spraying kerosene oil in selected places. Full practical details are given as to all these measures and the economic advantage of spending money upon them is pointed out. It is instructive to reflect that the success of the measures which the medical officers have so much at heart must lead inevitably to their own 'economic disadvantage' and the reading of this pamphlet may well serve to remind some enemy of its writers' calling that, like charity, medicine 'is kind rejoiceth in the truth, and seeketh not her own,' and so has a perhaps unequalled claim to the dignity of a liberal profession."

The campaign against mosquitoes bears the resemblance of a heavy artillery fire against the flies. We only wish success to the effort to check malaria. Rat-killing to prevent the spread of plague has failed in most places. So, we think mosquito-killing will prove.

Quinine has failed to cure malaria, especially the bad varieties in many cases. Arsenic has now been adopted. The prophylactic treatment of malaria by mosquito-killing may prove beneficial if they are able to perform the task. But what about the actual treatment. It remains in the same state of nebulosity as before. The question is, besides Quinine and Arsenic are there other drugs which are capable of curing bad cases of malaria? We believe that there are. The orthodoxy of the old school prevents them from adopting the rational method of cure, that is homœopathy.

CLINICAL RECORD.

Indian.

CASES BY DR. H. C. RAY CHAUDHURI.

1. *Cholera with black and white mucus cured by Veratrum, Aconite, etc.*

On the 8th December last, I was called to treat a case of cholera at Bagbazar, of a male adult aged about 30, with some peculiarity in the stool. He was being attended by a homœopathic compounder. I saw him at 1 P.M. From the last evening the stools began to appear with their rice-water character. He had *Verat.* 30 and *Ars.* 30 alternately. It was reported that the stool had lessened in number and quantity but since the morning of the 8th, it was again worse. The number of stools during the last night were not more than ten. Since the morning up till 1 p.m. he passed five or six stools, when he was getting *Iris v.* 3 dec. He passed a stool in my presence. It was mixed with black and white shreds of mucus mixed with water. Colic with nausea was present. I advised to give him *Verat.* 6. My house being far away, I could not independently take up the case. The family in which the case happened had confidence on the compounder. I had no alternative but to leave instructions with regard to the case, a drop a dose of *Verat.* after each stool. At 8 p.m. information arrived that he passed only two stools from 1 p.m., but they were of the same character, mixed with black and white shreds of mucus and water. I advised to administer *Aconite* 3 dec., a drop a dose after each stool. He was calm and quiet and not restless.

9th December. I was informed in the morning that during the whole night, he passed three stools, and they have become greenish in colour. Advised *Podo.* 3 dec. a drop a dose after each stool.

10th December. The news came that the patient was very much troubled with hiccup during the night. The stools were yellow and only two in number, during the night. *Hyos.* 6 dec., a drop a dose every half-an-hour or at longer interval as the need be. Arrowroot water was allowed as food.

11th December. The hiccup subsided after three or four doses of the medicine and there was no further necessity to use the medicine. He had no more stool and was progressing favourably.

Remarks. The interest in this case was with regard to the stools being mixed with black and white shreds of mucus. *Aconite* succeeded to remove them. In another case, I used *Chin. Ars.*, with success.

2. *Dysentery cured by Aco. F., and Ipec.*

K——, a boy aged about ten years, residing in Sankaritola East Lane was suddenly attacked with fever and dysentery of a severe form, passing blood and mucus. He had more than twenty stools during the day and night of the 16th April, 1908. Nausea was present but it was not constant. Tenesmus and tormina as usual. On the 17th April *Ipec.* 6 dec., every 2 hours up to 9 p. m., a drop a dose was prescribed.

18th April. He was better and the number of stools were reduced to eight during the day and night of yesterday. *Ipec.* 6 dec. was continued.

19th April. The stools were reduced to six in number, but there was more blood than mucus. *Nux Cortex* 3 dec., a drop a dose every three hours.

20th April. It had no decided effect in reducing the blood. *Ipec.* 6 dec., and *Nux Cortex* 3 dec., alternately every two hours. As he was feeling better and being free from fever for the last three days, I advised him to take rice and *Singi* fish soup.

21st April. Fever reappeared from the morning and rose to 103 F. From the morning up to 9 a. m., he passed 7 stools of mucus and blood. *Ipec.* 6 dec., every two hours a drop a dose.

22nd April. He passed yesterday and night, more than sixteen stools. *Aco. F.* 1 dec. and *Ipec.* 6 dec., alternately every two hours, a drop a dose. Jug soup was allowed.

23rd April. Yesterday, the stools were reduced to eight. *Aco. F.* 1 dec., and *Ipec* 6 dec., alernately every three hours a drop a dose.

24th April. Only two stools yesterday and without blood and of thick consistency. The same medicines and jug soup were continued.

25th April. He had no stool yesterday and was doing better.

Remarks. The use of *Aconitum Ferox* in the low dilution with *Ipecac.* often proves useful in severe cases of dysentery with mucus and blood.

3. *Marasmus with Prurigo cured by Sulphur.*

An infant of about 2½ months, residing in Sankaritola East Lane, was shown to me on the 21st February 1908. His flesh all over the body was in an atrophic condition. The muscles were not developed, and here and there assumed a flabby collection. They looked as if they were twisted and turned without growth. The skin of the body and particularly over the trunk and abdomen were all covered with prurigo. There was no history of syphilis. The scalp was covered with these eruptions but some of them assumed the character of impetigo contagiosa. The child all along was fed by Mellin's food, for want of mother's milk, to which particular attention was paid, being so advised by a qualified allopathic practitioner. I was astonished, why the child was so long fed with the artificial food when no decided improvement was observed. I changed the principle of feeding, and resorted to fresh diet of milk and barley water. For the prurigo *Sulphur* 30 globules, one at a time twice daily, was prescribed.

24th February. The child was visibly improving by the method of feeding. Prurigo was getting less on the trunk and abdomen. No decided improvement was observed with those on the head. *Sulph.* 30 globules.

2nd March. The improvement was uninterrupted. The eruption on the head seemed to be better.

17th March. He was doing much better than before, almost completely cured.

At the end of March all medicines were discontinued.

Remarks. This case imparts the instructive lesson that artificial food can not be conducive to the development of infants in all cases. On the other hand my observation leads me to denounce them on account of their secret preparation and being manufactured so long before use. I have seen cases of poisoning in infants from many artificially prepared stuffs.

Prurigo led to the administration of *Sulphur*. That one medicine and the change of diet produced a new and a healthy being. It should not be supposed that Calcarea, Abrotanum and a few other drugs have the power for the development of infants and children. The treatment should be according to the exigency of the situation. The blind-folded administration of any drug without proper pathological consideration proves generally useless.

4. *Multiple Abscess cured by Merc. Sol.*

C. L. Chatterjee's son, aged one year, residing at Vaishnavghata, near Jadubpore, came to my clinic on the 29th July for treatment of multiple abscess of the right side of the face as the result of erysipelas, which happened a month before. He had fever with the outbreak of the abscesses. I prescribed *Bell.* 30 globules, two at a time, twice daily.

6th August. He again came with his boy, having tried the medicine for eight days. I saw no improvement. I prescribed *Merc. Sol.* 12 dec., globules.

12th August. After giving the trial of the medicine for six days, I saw that decided improvement has ensued.

18th August. The child's face has much improved. In fact that the abscesses are fast disappearing without reappearance.

20th August. The father of the child reported that his son was doing well. All abscesses have disappeared from the face. Advised to continue the medicine for another week.

Remarks. Merc. Sol. was prescribed for the reason that the abscesses were an aftermath of erysipelas. *Mercurius* has benefited me many times in erysipelas and in its sequelæ, resulting in abscess or boil, though it is rarely used in that disease.

Foreign.

A CASE OF SEPTIC FEVER: PYROGEN?

By Joseph Luff, M.D., Independence, Mo.

Thirteen months ago duties outside of Medical lines called me to a neighboring state and the greater part of my time (three weeks) was spent in a small town where one lady physician—a graduate of a homœopathic college—and four "regulars" were practising.

One day when walking along the street, a call from the opposite side led me to cross over and enter the house of a family whom I had known for years. The head of the house, a large, dark, dirty complexioned man, of about 45, was sick, and I was requested to take the case. I told them I had no license to practice there, and, moreover, was engaged with other work, but, if the lady physician desired my help, would render it cheerfully. To this they consented, and I left, waiting to be called.

Three days later I met the physician, and she requested an interview at the house referrèd to as soon as practicable, we met there within two hours. The entire chest was covered with antiphlogistin. He complained of severe pain on the left side just below the nipple. There was great dyspnea; temperature 104; pulse very rapid; bowels severely constipated; breath foul; tongue large, very little coating, quite red; haggard expression; considerable restlessness and anxiety.

He was an intelligent man, and usually under good mental control. Had suffered at intervals, for twenty years, from some heart trouble, which would "floor him" as he said, for half an hour at a time, being utterly unconscious. The physician was somewhat alarmed. She informed me as to treatment, and the medicine on the table corroborated her statement: Aconite 2x and Bryonia 3x in combination in one glass; another glass contained a sleeping potion, and another held something to be given to move the bowels. The first mixture was being given every fifteen minutes, and the others as required.

Upon careful inquiry, I learned that the man had just returned a week before from a neighbor, where for ten days he had waited upon six members of the family who were sick with typhoid fever. The attending doctor had insisted on excluding all air from the sick rooms, and had even hung blankets over the cracks between doors and frames. During ten days this man had been compelled to inhale the polluted atmosphere of the rooms, while attending his sick friends (I should have doubted this latter relation, as to the doctor's course, had my patient not been a man of undoubted veracity).

In private consultation with the lady physician, I rehearsed all the features connected with the case, and when I suggested a radical change in the treatment, found myself a useless consultant. The single remedy was not accepted. The antiphlogistin must remain, and the potency of the remedy must necessarily be low and of frequent repetition in such a case. Finding my therapeutics not in demand, I left, expressing regret that I could be of no service, under the circumstances. She obtained from me a promise, however, that upon call I would return.

Two days passed, and about noon I was summoned to meet the lady at once. Upon arrival I found the patient with temperature half a degree higher; pain more intense; no action of the bowels; dyspnea more pronounced; pulse rather less; a slight but offensive moisture on parts in sight. Patient asked me if the case was being handled according to my idea, and I promptly said, "not entirely." He and the family requested the physician to allow me to conduct the case in my way, and she to follow my directions. Taking me aside, she canvassed the details with me, confessed her extreme alarm and asked me to advise, and she would execute my will in the matter, as though the case were mine. She had that morning told the family that it would be, at least, fourteen days before the patient could get up, if at all.

I surprised her at the outset, by ordering the antiphlogistin taken off; then the patient was sponged, and thoroughly but gently rubbed all over with pure olive oil, to be repeated twice, or more frequently, each day.

My available medicines were few indeed, and no pharmacy near. The physician's office contained only a few low homoeopathic potencies, and a large supply of proprietary remedies—combinations, embracing alkaloidal preparations, etc. I had no repertory, and did not think one absolutely necessary. I gave the patient an enema—castile soap combined with three quarts of warm water—threw out all the remedies on the table, put five or six drops of Pyrogen 7x (the only potency I had) into half a tumbler of water, two teaspoonfuls to be given every two hours, the patient not to be disturbed if he slept.

Calling at 8 o'clock the next morning I found his temperature 101; pulse 110; breathing better; pain less, and a much better expression on his face.

The lady called at 11 A.M., and found the temperature 100, and expressed astonishment and fear that it was only a temporary subsidence. At night I found the condition about the same as when she was there, and directed that the length of time between the doses should be doubled.

At 5 A.M., the next morning a telephone ring aroused me to receive the information that my patient's temperature and pulse were "away below normal," and requested that I call on him earlier than usual, which I did, though not so early as they desired. I recalled the life history of the man and felt no alarm. 7 A.M. found me at his bedside: pulse, temperature and respiration were normal, and remained so. There was but a faint remainder of the pain on the left side when breathing deeply, and his face was lighted with a smile.—*The Medical Advance,* June 1908.

Gleanings from Contemporary Literature.

MODERN CONCEPTIONS REGARDING CHEMICAL REGULATION OF FUNCTION.

By GRAHAM LUSK.
NEW YORK.

A tree maintains its life by chemical correlation of function. Nitrogenous compounds are obtained through the root and sugar is manufactured by the leaf. Loss of the leaves or of the roots results in death. There is here no nervous system to bring about correlation.

In the higher vertebrates the nervous system is known to regulate activity. Much of this regulation is below the threshold of consciousness. A beheaded fowl may fly, a beheaded duck swim, and a "spinal dog" respond to the "scratch reflex." All these coördinations instantly cease with the destruction of the spinal cord. The nervous system, however, is not the sole integrating factor of the organism. If, for example, the adrenal glands be extirpated, death follows within a few hours. This is not due to shock from the operation, as was beautifully shown by the experiments of Dr. Busch, of Buffalo. Dr. Busch grafted a section of an extirpated adrenal from a rabbit, into the animal's own kidney. Three months later the second adrenal was removed. The rabbit made a complete recovery, and subsequent investigation revealed a survival of the medullary portion of the transplanted adrenal, provided with a good vascular supply. The medullary portion prepares the essential constituent, adrenalin.

The cause of death after adrenal extirpation is therefore due to the removal of the gland, and not to the direct injury of the nerves. It is well known that the adrenals prepare a powerful substance, adrenalin, which maintains the tone of the vascular system, and of muscles dominated by the sympathetic, such as the dilator of the pupil and the muscles of the hairs. This effect is produced whether the nerve fibres to these various tissues be cut or not, as many experiments of Meltzer have demonstrated. The nerve endings, however, must be intact for the adrenalin to be effective.

Adrenalin is a substance which may be heated to boiling without injuring it. It is therefore not a ferment. It however, belongs in the class of "hormones" or "chemical messengers," substances produced in a certain locality which excite activity in other parts of the body. Thus, the adrenals manufacture a substance, which arouses activity in organs controlled through the sympathetic nervous system.

Krehl reports a case from Marchand's Institute, in which tuberculous infection of the adrenals was accompanied by enlargement of thymus, thyroid, hypophysis, and spleen. This is cited only to emphasize complexities difficult of explanation. When it is considered that all the organs of the body pour products of their activity into the general blood stream to be widely distributed, the possibilities of abnormal disturbances appear to be numberless. Krehl points out that it is this background which yields infinite variety in the physician's practice. The very difficulty of the subject has brought into the literature a vast amount of rubbish based upon little else than grotesque images of the mind. No absurdity has been too great to prevent its further embellishment by distorted fancy.

As regards the upper digestive tract, it is known that the production of saliva is due to a reflex through the nerves. Ludwig, in 1851, showed that stimulation of the chorda tympani resulted in a large flow of saliva from the sub-maxillary gland. A similar influence over gastric secretion was not shown until the modern researches of Pawlow and his school. This investigator found that if the vagus be cut in the neck the vaso-constrictor fibres contained within the nerve degenerated after three days, and then on stimulation of the still irritable secretory fibres, a copious flow of gastric juice was produced. This is the normal pathway for that outflow of secretory impulses from the brain to the stomach which accompanies a good appetite. Starling believes that there may be no secretory nerves to the pancreas. Pawlow, however, declares they are present in the vagus, and Popielski affirms that he has stimulated certain branches of the vagus in the thoracic cavity which caused a secretion of pancreatic juice within three to four seconds, or as quickly as saliva may be obtained on stimulation of the chorda tympani.

Intestinal juice may also be secreted through the influence of nervous impulses, for a solid substance introduced into an intestinal loop which has been isolated from its extrinsic nerve supply, will excite a flow of fluid into the gut. This is a reflex through the local plexus of Meissner.

No nerve impulses have ever been made out as exciting the liver to the secretion of bile.

Bayliss and Starling have discovered that a method of secretory excitation exists other than that through nervous pathways. They state that a "chemical messenger" or hormone, which they call *secretin*, arises through the action of hydrochloric acid on the duodenal membrane, and is carried to the pancreas, liver, and intestines, exciting secretion in all these localities. A similar excitant called gastric secretin was discovered later by Edkins, which causes a flow of gastric juice.

When food is taken into the mouth, there is a reflex production of saliva whose amount is determined by the kind of food, and is also modified by visual and olfactory sensations. An aroused sense of appetite causes a discharge of nerve impulses through the vagus to the stomach, bringing about gastric secretion. Certain substances, like bread for example, if directly introduced through a gastric fistula into the stomach, cause no gastric secretion. But if the bread be partly digested and then introduced through the fistula, gastric secretion results. This secondary secretion takes place after severance of the stomach from the central nervous system by cutting the vagi and extirpation of the sympathetic plexuses. Furthermore, if the stomach be separated to form two pouches, a smaller and a larger, and a similar extirpation of the nerves takes place, then introduction of partially digested bread into the larger pouch will cause a secretion of gastric juice into the smaller cavity. Pawlow and his pupil Popielski explain this secondary secretion as due to a local reflex through the intrinsic ganglia of the stomach wall brought about by the stimulus of the products in the partly digested bread. However, Edkins finds that on boiling the mucosa of the pyloric antrum with water or 0.4 per cent. hydrochloric acid, he is able to obtain a filtrate which, if injected into the jugular vein, causes a flow of gastric juice. Similar extraction of the fundus produces no active liquid. Edkins therefore, believes that the process of secondary secretion of gastric juice depends on the absorption of certain substances from the stomach by the pyloric membrane, which in turn, yields "gastric secretin" to the blood stream, which later excites secretion in the fundus.

Cannon has recently emphasized the fact that while free hydrochloric acid in the stomach causes the pylorus to open, the same acid in the duodenum brings about its closure. It is known that this entrance of gastric chyme into the duodenum causes the flow of pancreatic juice and in lesser degree bile and intestinal juice. Heidenhain called attention to the fact that hydrochloric acid on the duodenum was the most efficient stimulus for pancreatic juice. This mechanism is of greatest value, for as long as acid chyme passes from the stomach just so long are the digestive glands stimulated to secretion. Pawlow believed that hydrochloric acid acted on the sensory nerves of the duodenal wall and caused a reflex secretion of pancreatic juice through the vagus and splanchnics. Later Popielski showed that the vagi might be cut, the sympathetic exitrpated, and still an abundant flow of pancreatic juice followed the introduction of hydrochloric acid into the duodenum. Popielski attributes this reaction to a reflex due to the presence of local nerve connection between the gut and the pancreas, which obviates the necessity of the long reflex paths.

Starling, however, believes that the principal element involved is the production of secretin within the duodenal membrane which is carried by the blood stream to the pancreas. If an extract of the duodenal membrane be boiled with acidulated water, nearly neutralized, filtered, and then introduced into a very large secretion of pancreatic juice results. Cold water alone will not extract secretin from the mucous membrane, so Starling believes that a substance called prosecretin normally present in the gut but this requires an acid to activate it. Prosecretin can also be activated by organic acids, soaps and other substances. Secretin may be produced from almost the entire length of the gut, but in greatest quantity from the upper portion. Introduction of hydrochloric acid directly into the blood has no effect whatever on the pancreas.

In the crucial experiment of Bayliss and Starling a loop of the jejunum was separated by ligatures from the rest of the intestine. Introduction of 0.4 per cent. of hydrochloric acid into this loop produced at once a flow of juice through a pancreatic fistula. The loop was now deprived of all its nerve connections and the mesenterium was cut away so that the only connection between the gut and the rest of the body lay in the blood vessels. Introduction of acid again produced as great a secretion of pancreatic juice as before. This experiment proves that nerve reflexes are not necessary in the production of pancreatic juice, but that Starling's theory of chemical excitation through the blood stream is correct.

It must, however, be added that Popielski has failed to confirm Starling's experiment. He can obtain no secretion after denervation of the intestinal wall and vigorously denies great improtance to secretin.

In spite of this discordant note, the work of Bayliss and Starling is now generally accepted in the literature. However, it may well be that influence of nerves on the pancreas is greater then these investigators are inclined to acknowledge.

Starling has also shown that secretin injections promote a flow of bile and of intestinal juice. It is, however, certain that the reabsorbed bile salts are very efficient cholagogues and long ago Voit showed the dominant influence of proteid ingestion upon the formation of bile. Starling would explain this latter phenomenon through the large quantity of acid chyme produced.

The demonstration of both nervous and chemical correlation of function in digestive glands is an example of the "factors of safety" as set forth by Meltzer.

It was long ago shown by Voit that removal of bile from the intestinal tract profoundly influenced the proper absorption of fat, whereas the digestion and absorption of proteid and carbohydrates were not disturbed. Extirpation of the pancreas leaves the power to digest and absorb proteid apparently unchanged. Fat and carbohydrates are said to be less freely absorbed than normally.

Ordinarily the pancreatic juice contains only zymogens, or mother substances of enzymes, which are later activated on reaching the intestine by other ferments called kinases. In pathological cases the zymogens of trypsin and steapsin are activated within the gland and self-digestion with fatty necrosis of neighboring tissue is the result.

If the portal blood be diverted to the venacava in an animal so as to shut out the liver, serious intoxications are seen, due to the accumulation of chemical substances ordinarily rendered innocuous. Similar pictures arise in diseases of the liver. Chemical poisons act on the liver cells destroying their function, and hence the explanation of much generally classed as auto-intoxication. Dr. Pearce and Dr. Jackson have recently published valuable and exhaustive analytical data on this subject.

It is widely known the complete extirpation of the pancreas produces diabetes with absolute intolerance for glucose. Here one must accept the theory of Lepine that a ferment is normally provided by the pancreas which is necessary for the first cleavage of sugar in the organism.

There is no time to mention the function of the thyroids, parathyroids, testes, ovaries, pituitary body, etc. All these produce substances valuable for life.

Starling has shown that extracts made from the fetus of a rabbit if injected into a virgin rabbit which has never been with a buck will cause development of the mammary gland. Extracts of the placenta and uterus have no such effect. Here then there is a production of a hormone in the fetus which supplied to the blood causes hypertrophy of the mammæ of the mother.

The beautiful experiments of Pässler show that after removal of one kidney and a large part of the other in a dog, urine may continue to be formed, but a vaso-constriction of the blood vessels may develop. Whenever this occurs hypertrophy of the left ventricle ensues, to be followed later by similar hypertrophy of the left auricle and right ventricle. This development occurs only when the parenchymatous tissue of the kidney is sufficiently reduced in amount. We may, therefore, believe that some substances ordinarily removed by the kidney are retained in sufficient quantity to excite chemically the vasomotor system, thereby producing compensatory development in the heart.

One more examaple of chemical regulation may be cited. It has long been known that a transitory fever sets in after some operations involving no septic influence, the so-called aseptic or surgical fever. Dr. Arthur R. Mandel has shown that in such cases the amount of exanthin bases increases in the urine. In typhoid and pneumonia he finds a similar increase, and in all cases the amount of exanthin bases present is proportional to the height of the fever. He has furthermore shown the xanthin given to a monkey causes a rise in temperature, a rise which is prevented by simultaneous administration of salicylic acid. It may well be that the deficient distribution of blood to the periphery which is part of the syndrome of fever is caused by the action of xanthin bases upon the temperature regulating apparatus in the mid-brain. The administration of milk which is free from xanthin bases to a febrile patient therefore finds its scientific justification.—*New York State Journal of Medicine*, June 1908.

VASCULAR CRISES.

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ARTERIOSCLEROSIS may exist during many years without giving rise to a single subjective symptom. It is surprising to note that in exceptional cases symptoms which are ominous and profoundly affect the patient during their persistence may appear during the course of arteriosclerosis, without recurring for months or even years.

It may be assumed that an artery which is the seat of non-specific arteriosclerotic change, atheroma, endarteritis, or periarteritis, never again returns to its normal condition. There are, in all probability, changes in arteries of a degenerative, productive, or inflammatory nature of syphilitic origin, which may be favorably influenced by antisyphilitic treatment.

Young syphilitics have presented with evidences of aortitis, aortic systolic murmurs of arterial origin as opposed to inflammatory or endocardial lesions, occasionally associated with attacks of angina pectoris, or cases of syphilitic endarteritis influencing the myocardium and giving rise to cardiac incompetence, in which relief or cure has followed thorough antisyphilitic treatment with a rational regime.

The fact remains nevertheless that arteries which are once the seat of non-specific degenerative change, whether in the young or in the aged, in those entitled to signal changes because of improper living or from other unknown causes, are never again likely to return to their normal condition. If there is any change at all it is one of retrogression.

It is a surprising clinical fact that arterial change is better borne by the aged than by the young and that the evident and palpable lesions in the former are often present during many years without giving rise to a single painful or serious subjective symptom.

Not infrequently in the presence of acute infection in the aged, with associated arterial change, we fail to find a single subjective symptom referable to such pathologic lesion. It is not at all uncommon to find the radial artery uneven, "pipe-stem," the aortic first sound muffled or an arterial aortic obstruction, temporals standing out in bold relief, the diagnosis of arteriosclerosis positive; and yet the individual has never suffered a pang, or the slightest inconvenience. On the other hand serious and threatening symptoms are present, often painful, in causes with palpable arteries which given no clue to the underlying pathologic condition.

A patient with a soft radial pulse, a urine of normal specific gravity, no albuminuria, is suddenly, while he is supposed to be enjoying the best of health, seized with alarming angina pectoris, positive evidence of ossification, atheroma, or arteriosclerosis of the coronary vessels. This patient may have a severe angina pectoris to-day, but in spite of an uninfluenced and unchanged pathologic process involving the coronaries deeply, a condition which from our pathologic study we know is permanent, the heart pang and other reminders may be absent for months or years at a time; the patient may never have a recurrence of cardiac spasm and may die of some remote complication, acute or chronic.

Arteriosclerosis in the majority of cases is accidentally discovered. It is safe to say that this is particularly true of patients who have passed the sixtieth year. In patients between forty and fifty arteriosclerosis is likely to make itself known by positive painful or objective symptoms, readily interpreted, pointing at once to the organ most influenced by the degenerative process. *No patient is too young or too old to be thoroughly searched for arterial change.*

Clinicians and pathologists have tried to explain the cause of these painful, paroxysmal or evanescent symptoms in the presence of profoundly changed vessels. The lumen of the artery is narrowed by deposit, the thickened walls of the arteries remain unchanged, in many cases the organs nurtured by these changed twigs are more or less degenerated or disorganized; and yet in spite of these facts, symptoms referable to these special arteries and to the parts supplied by them are often evanescent, rarely continuous or may be entirely absent.

Some change in the artery arousing revolt and consecutive sensory symptoms must account for this history.

A number of years ago the term "Vascular Crisis" was introduced—a very happy and splendid characterization—to use in connection with recurring symptoms, usually painful, which arise in the domain of changed arteries.

Vascular crises, it may be said are associated with diseased arteries in which a definite symptom complex is due, as a rule, to vascular contraction, narrowing of the artery, or arterial spasm, though occasionally it may be assumed that dilatation or vasodilator paralysis may predominate. If we agree that these crises occur, and most clinicians subscribe to the conclusion, then a great many of the conditions to which we have referred are readily and easily explained. We can thus promptly explain the unique behavior of angina pectoris and other paroxysmal conditions always painful and often threatening.

It may be wise to emphasize the fact that vascular crises are usually provoked by some factor which throws extra tax upon the organ invaded. Thus it is not at all uncommon to find that a patient develops angina pectoris after a hearty meal when the stomach is full and digestion is in progress. If at such a time he walks or exerts himself physically, an added amount of work is placed upon the organ, an extra amount of blood is needed, the nutrient arteries are insufficient, revolt follows, arterial paralysis or spasmodic contraction of the changed artery results.

The closure of one coronary does not lead to death; the closure of both coronaries leads to immediate death and this may follow without pectoral angina. We consider angina pectoris, and we are now speaking of pectoral angina, a symptom complex due to vascular crisis, associated as a rule with diseased coronaries. Arteriosclerosis far advanced may be present for years associated with coronary involvement without a suggestion of angina pectoris; the element of vascular spasm has never been added.

The Adams-Stokes phenomenon is often dependent on vascular crisis. It is with pride that we point to the work of American pathologists and physiologists in connection with this syndrome of symptoms.

The Adams-Stokes phenomenon is one of the most interesting combination of symptoms that we meet. Included in this complex are bradycardia, peculiar epileptiform seizures, dissociation of ventricular and auricular contractions, causing a venous pulse out of proportion to the slow arterial contraction, the latter at times being slower than the respirations, in which the symptoms are due to a "block" in the "fibres of His"—lesions involving the arteries supplying the interventricular septum, or, as has been recently shown gummatous or other masses breaking the continuity are responsible for the symptoms. Here again we have persistent conditions but the symptoms are paroxysmal. "Heart Block," it would seem, can be satisfactorily explained by the changes which affect the "Bundle of His" during arterial spasm or vascular crisis.

The Adams-Stokes phenomenon fortunately for the patient is not a continuous symptom complex. It is a complex which is paroxysmal. which may recur many times during a single day, which may be followed by long periods of freedom from symptoms, during which the pulse may possibly become normal or may continue slow without any other complication. The symptoms are due in all probability to a recurring shutting off of nutriment to these important heart fibres. Arteriosclerosis of the vessels in the interventricular septum is not unusual. In what other way can we explain the absence and final recurrence of symptoms in these cases?

Angina pectoris need not give rise to symptoms referable to the pectoral regions alone. There are cases of subdiaphragmatic angina in which the lesions are in the coronaries. These cases are not to be confounded with abdominal angina in which there may be no change at all in the coronary vessels and which Ortner considers under the head of "Dyspragia Intestinalis Intermittens."

Occasionally a patient who has had angina pectoris presents without symptoms referable to the pectoral region, without the characteristic radiation of pain from the arm, but with pain below the diaphragm—and all the fears of true angina pectoris. This may be due either to a spasm of the mesenteric arteries or an expression of coronary disease, or, as sometimes happens, there may be disease of both coronaries and the mesenteric vessels, particularly the superior mesenteric artery. The sensory paroxysmal symptoms are due to vascular crisis. The coronary may alternate with the mesenteric crisis, one may occasionally follow closely upon the heels of the other.

There is a condition which must be divorced from angina pectoris and which Ortner, as we have already mentioned, has well described under the head of Dyspragia Intestinalis Intermittens, in which the greater change is localized in the mesenteric vessels. The history of these cases is exceedingly interesting. These patients have more or less intestinal indigestion, foul-odored stools, a great deal of flatulence, eructation of gas, attacks of pain, particularly in the upper abdominal regions, which are paroxysmal and generally associated with the fear of impending death; there may or may not be hypertension. There is an angio-spasm within the splanchnic area which yields to vaso-dilators. Post mortem examination shows greatest change in the superior mesenterics of a degenerative character. These patients may die suddenly as do those suffering from pectoral angina. The symptoms of spasm only occasionally appear.

A patient is at present under observation who has characteristic dyspragia, with a general arteriosclerotic process, whose blood pressure during the early days of treatment was above 200 mm. Hg., and who yields only to drugs which dilate the abdominal vessels: nitroglycerine, erythro tetranitrate, sodium nitrite, etc.

Another class included is that which has puzzled clinicians during many years in which there are evanescent symptoms of cerebral origin, no embolism, nor cerebral hemorrhage, but in which the symptoms are sudden and evanescent.

For instance, a patient in whom we diagnosticated arteriosclerosis, without warning, possibly with a slight preceding headache, suddenly becomes aphasic, no evidence of paralysis or convulsions in the majority of cases, but a sudden complete ataxia and amnesic aphasia. The patient may be able to mumble but is unable to express himself. He has not lost consciousness; he points to objects correctly; he understands what you say to him; but there is this complete abeyance of speech function. In the course of four or five minutes, possibly a little longer, the symptoms begin to fade or disappear suddenly. The patient seems entirely unaffected by what has transpired and is able to continue his conversation without the slightest trouble, and returns to his former condition. There are no resemblances to epilepsy when the case is carefully studied; arterial pressure is high; there is likely to be renal change. Vascular spasm causes these symptoms.

Another case had the recurrence of these symptoms during many months; always a high blood pressure, always positive evidence of general arteriosclerosis with repeated vascular spasm. In one of these crises there were associated convulsions which were quite general, but the horizon was again cleared and the patient was again able to speak; his mind became clear. Conditions finally overpowered him and he died of cerebral hemorrhage after two years with luetic degeneration of the brain arteries.

If a patient with valvular lesion or a vegetating endocarditis develops a sudden paralysis or aphasia, we could not consider such added symptoms due to vascular spasm, but would refer the change to the breaking away from the free endocardium or from the valve of a plug which had entered

.the artery and had been washed out as the symptoms disappeared. This is not the pathologic condition associated with vascular crisis.

Spasm of the cerebral vessels is usually associated with diseased arteries.

If the disease is of specific origin the changes in the arteries correspond exactly with those which Huebner (whose work still remains a classic on Syphilitic Diseases of the Arteries of the Brain) described.

If the diseased conditions is due to simple degenerative change of the arteries, *i.e.*, atheroma or arteriosclerosis, we find in some cases the evenly thickened artery with the occasional deposit of lime salt, or a far-reaching atheromatous change, possibly miliary aneurisms.

If, with these condition persisting vascular crisis lead to death, there are no hemorrhages, these are no more likely to be present in the brain, than are hemorrhages into the heart muscle where death has been due to angina pectoris—though cerebral hemorrhage, as in the case cited, may cause death and follow a long series of vascular crises.

In connection with this subject we refer to painful affections of the extremities due to vascular crises. A diseased condition to which considerable attention has been paid of late, is intermittent claudication. We are hearing and learning more of this peculiar condition as arteritis obliterans is better understood. It is a condition which is due entirely to changed blood vessels with added arterial spasm as the lumen grows smaller.

The following case has been watched during a number of months. The patient, male. 60 years of age, a hard worker, temperate, merchant; says that during a—number of years he has been short of breath. This gave him no great inconvenience, but within the past eight or ten months he has noticed that whenever he walks, particularly after eating, either on the level or up hill, he is seized with violent pains in the calf muscles of the right leg. These pains are agonizing and force him to halt.—If he rests the pains disappear, as do those of angina pectoris under similar conditions. If he resumes his walk the pain recurs with increased severity until he is finally forced to give up and rest during a varying period of time, when he may possibly walk for a short distance without the severest pains, but yet he is reminded of the presence of the spasm while extreme hyperesthesis of the skin covering the calf muscles persists during several hours. This is a typical history of intermittent claudication in a man who has far-reaching arteriosclerosis with hypertension. When extra work is demanded of his muscular system the arteries most invaded revolt and sensory symptoms follow.

These pains of an intermittent character associated with arterial degeneration in the extremities are frequent, and in many cases persist during years, indeed, many years before endarteritis obliterans completely shuts off the blood supply, in some of these cases leading to localized gangrene or limited patches of necrobiosis. Such conditions are not infrequently associated with diabetes, syphilis, or other toxic disturbances. We have seen cases in which these pains have ceased for weeks, months, or even years. Patients had forgotten previous suffering when suddenly the pains were renewed with increased severity, the time between the paroxysms grew shorter, finally the local conditions left no room for doubt as to the exact pathologic condition which was present. Associated with a fully developed diabetes during many weeks and mouths there are agonizing vascular crises which may or may not be associated with gangrene. Physical examination of these cases show hypertension as a rule with marked evidence of arteriosclerosis.

Another class of cases in which vascular crises affecting the extremities predominate, may be considered under the head of erythromelalgia. Erythromelalgia is a condition which Weir Mitchell described in 1872 associated with most distressing suffering, limited as a rule to lower extremities, in which the pain is paroxysmal, is associated with great redness of the extremities, particularly when suspended. This characteristic redness has given the disease the name of "red neuralgia."

We have examined the blood vessels in these cases and invariably found that the disease was not limited to the nerves but was due to an obliterating endarteritis or a degenerative change of the blood vessels of the extremity involved. Weir Mitchell holds that erythromelalgia is never associated with gangrenous processes nor with Raynaud's disease. We have, during the past twelve years, published the records of a number of cases in which we have proved that erythromelalgia may persist during many years, and may be followed either by Raynaud's process or may be associated with it or with far-reaching gangrene, and the results of the clinical investigations of others prove the correctness of what we held several years ago.

In one of our cases a woman had agonizing pains during a number of years in the fingers of one hand, with characteristic appearances of erythromelalgia. The pain came on in paroxysms, and was always characterized by redness of the surface which was covered with thousands of sweat globules. Nothing, not even large doses of morphia relieved the pain. Finally the thumb sloughed as the result of a gangrenous process. This patient had at the time what we frequently find with Raynaud's disease, limited gangrenous patches of the tragus. The sloughing of the finger was followed by marked relief of the pain. The arteries were found to be the seat of endarteritis. She lived a number of years after the sloughing of the finger. She finally died of tuberculosis.

In these cases we assume the great influence of vascular spasm ; in all, the arteries showed positive endarteritis.

In our service at St. Joseph's Hospital we found a man who had suffered for a number of years from red neuralgia ; he was a blacksmith, supposed to be non-syphilitic, about forty years of age. As soon as his left leg was suspended red neuralgia commenced. The leg was crimson, covered, as is usual, with thousands of sweat globules. He continued in this condition with final absence of pulse in the left posterior tibial, a high blood pressure and continuous evidences of arterial hypertension.

Finally we noticed a spot of gangrene at the tip of one of the toes on his left foot; then came a symmetrical change in the corresponding toe of the right foot. Erythromelalgia with Raynaud's process following was our positive diagnosis. The process of death in the limb first affected was not halted by any treatment which we instituted. The man's suffering continued. There was not a moment when he was relieved. There is no acute suffering which can compare with that of erythromelalgia. • The conditions in this case went from bad to worse; from this little spot of Raynaud's process we had extending gangrene until finally the entire foot became gangrenous and it was necessary to amputate the left leg about three inches below the knee-joint.

Listen to the sequel: The man, remember, had general arteriosclerosis; when he left the hospital there was localized sloughing of the stump but this finally healed and the bone is now fully covered. A few months ago this man presented with erythromelàlgia fully developed in the right foot. His former suffering is being repeated in the remaining foot. Obliterating endarteritis with vascular spasm led to gangrene, making amputation of the remaining leg necessary.

A few years ago I saw a similar case of erythromelalgia and intermittent claudication with Dr. Levy. The man had suffered for years with erythromelalgia, developed a limited symmetrical Raynaud's process. His suffering was unrelieved; he became a morphinist. Gangrene of one leg developed, demanding amputation ultimately at the hip joint. Then there was extension upward in the opposite leg; gangrene following the same course as in the limb first involved, and when the sufferer died he had lost both lower extremities after a long period of erythromelalgia, intermittent claudication and gangrene. This was a case of endarteritis without diabetes, and so far as we could learn, no syphilitic taint.

When these conditions persist for years before gangrene develops with pains that are paroxysmal, in some cases long periods of freedom from symptoms, we may be sure that we are dealing with vascular crises—a spasm of the arteries associated with incipient degenerative change.

I had a very interesting experience many years ago with a man whom I had treated for malignant syphilis during a number of years. He consulted me finally for a severe pain which he had for months in the terminal phalanges of both hands. When the hands were hanging down or when he was using them, the pain became unbearable. This pain was associated in turn with all the characteristic features of red neuralgia. During the early days of the disease the finger tips were hot, red, sweat-covered, the radial pulse was thick at both wrists; finally he had "marble fingers." The stage of asphyxiation of Raynaud's disease followed erythromelalgia.

This condition terminated in gangrene of all the terminal phalanges of both hands. The process of healing was complete and the tips of the fingers were covered with healthy tissue, and were club-shaped after healing. He lived a great many years without any recurrence of his pain after a rigorous antisyphilitic treatment. This is one of the most interesting histories I have ever studied in connection with the subject of endarteritis obliterans specifica.

An interesting experience that seems to corroborate the theory of vascular spasm in erythromelalgia and intermittent claudication is mentioned by Ortner in his paper on dyspragia. He mentions the case reported by Wagenmann of a man about sixty-three years of age who had arteriosclerosis and who had transitory periods of blindness in his right eye. On one occasion Wagenmann was present when this man became suddenly blind. He made an ophthalmoscopic examination and found that the arteries during this period of blindness in the background of the eye, the retinal vessels, were empty. They were converted into thread-like shining strands, yellow in color. Normal pulsation had ceased. The veins resembled thread-like but red strings. Pressure on the eye did not cause pulsation. Wagenmann had the opportunity of observing the background of this man's eye during the entire period of blindness which continued ten minutes and vision returned as the spasm of the vessel was relieved, the arteries filling and the veins dilating with a return of pulsation.

This is a most interesting and telling experience in connection with this subject of vascular spasm. It proved that in the case recorded there was a complete occlusion of the blood vessels, a spasm which shut off the blood supply and that vision only returned when that spasm was relieved and the circulation was restored. The circulation during the spasm was positively inhibited.

In the pains of lead colic in which arterial tension is high, as well as in the crises of locomotor ataxia with arteriosclerosis, within both, a strong suspicion of changed mesenteric vessels, vascular spasm within the splanchnic area may ultimately prove to be a predominant factor.

It is not long since our attention was called to these vascular anomalies. Physiologists and pathologists were at a loss to understand these phenomena. The influences of peripheral circulation had been too long ignored. We had failed to look beyond the heart in many cases of arterial disease. May not the ductless glands, by perverted action, lead to insidious change? Experiment proves the case with which adrenalin causes change in arteries.

Arterial resistance, the quantity of the blood, the functional ability of the heart, the function of local organs, must all be taken into consideration, if conclusions are to be reached in connection with these paroxysmal sufferings to which I have called your attention.

The prognosis and the treatment of these conditions are not particularly encouraging. Unless these are dependent upon a removable cause, the greatest and the only improvement follows proper diet, rest, guarded exercise, local treatment and the free use of vaso-dilators. Improvement and temporary relief may follow but not *cure*. Vascular crises of syphilitic origin may yield, sometimes do yield, to energetic treatment, provided always that the patient be treated energetically and early. The great danger lies in the fact that Nature brooks so many insults, is so tolerant and long suffering, that the revolt which certainly follows and which makes clear the presence of arterial change, is too long postponed to admit of reparation.—*New York State Journal of Medicine*, June, 1908.

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THE
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MALARIOUS MAL-ANÆMIA.

General practitioners of medicine in this country may be astonished to find a new name with regard to malaria. They have the belief that all patients suffering from malarious fever look anæmic. Then, what is the use of the application of a new word? They further think that anæmia of malarious fever is essentially bad, and there is no good feature in it. Anæmia of malarious fever, they may say, is not an incurable or dangerous disease, for which particular attention requires to be drawn.

We do not mean that by the term malarious mal-anæmia, we convey the same significance. It is a form of the disease which is not often observed. In this malady the stools assume black colour. The consistency is generally pappy. At first, the stool is brownish or brownish green, and then the gradual change follows. It stealthily assumes blackish hue and may turn into deep black. The stools are usually not more than five or six in number during day and night. This form of the dangerous disease passes by the name of dyspepsia, for thoughtless practitioners do not attach much importance to it. On the contrary, it should be known that malaria has assumed the grave form. Enlargement of the liver and spleen may not be present. For all that, the black stool shews a grave consideration. This characteristic of the stool is more found in the Kala-azar of Assam than in this country. We have observed a few cases of this nature in Bengal. Hence we think it is our duty to call attention to it.

The pathological consideration of the disease can only put it into its proper light. Only symptomatological consideration is of no consequence. It is an exosmosis of the blood and the blood cells through the intestinal canal. Sometimes the urine may assume bloody character. There is no room for doubt that malarial parasites disintegrate the red and the white cells. The white cells have the power of resistance on account of their phagocytic power. The red cells do not possess any such function. The lymphocytes are also disintegrated. Shortly, it is oozing out of blood with cells through some vital organs. No regular post-mortem examination has yet been made. The pathological indications are full of consideration. It is generally fatal, particularly for its non-diagnosis. Recently a case happened in our neighbourhood. It was atteneded by a reputed physician of the allopathic school. He had no hesitation in pronouncing it dyspepsia. It should be assumed that he evidently meant malarious dyspepsia. Apart from his diagnosis, we glean the following facts :

S——aged about thirty-five was suffering from malarious fever for the last six months living in their country-house in a village, in Bankura. The family has a town-house but for the sake of business, he used to pass most of his days at the village. He had malarious attacks before, but he generally came to Calcutta for treatment and was cured. This time he persisted in remaining at the village for reasons best known to him. There he indulged in liquor and meat. When the disease assumed grave appearance, he came to Calcutta. In the village he was under some sort of treatment or other, but mostly allopathic. After coming to Calcutta, about fifteen days before his death, he was placed under the treatment of a reputed allopathic physician who treated him mostly with indigenous drugs.

On the day of his death, 13th July, 1908, we visited him at eleven in the morning, and he died at about two in the afternoon. I could get the following interesting account from a relation of his, a man of medicine :

He was passing that kind of black stool for the last four months and used to get fever almost every day. It should be noted that malarious mal-anæmia is more an accompaniment of the quotidian type than of the tertian or quartan. He would take medicine as well as his favourite foods. Gradually, the anæmia became severe. He had congenital heart-trouble which assisted to create his fall. In fact, he was very careless, even for his mitral insufficiency. His urine was examined by a competent chemist which disclosed the terrible fact of profuse albumen and disintegrated cells. Some pus cells were in the urine. It was due, perhaps, to his gleet. The colour of the urine was very high and at one time he passed blood. The examination of urine did not leave any room for doubt as to the diagnosis of the disease.

The last consideration is, what should be done in these cases, assuming a case is entrusted to the care of a competent medical practitioner, when the black stool has appeared ? *Leptandra* has often failed, for the reason that it cannot resist the out-flow of the discoloured blood and the disintegrated cells. The chief remedy which has given proof of its efficacy is *Crotalus.* The medicament should have at once a trial, if the case have assumed grave appearance. Otherwise *Nux cortex* with *Ipecac* may be efficacious. If *Crotalus* fail then *Lachesis* or *Naja* should have their scope of work. What is wanted, is the regular and methodical examination of stool and urine at regular intervals.

In the *Lancet* July 4, 1908, an analogous case has been given by Dr. J. Cropper of Nablus in Palestine. The patient, a Samaritan, contracted the disease in the Jordan valley. Dr. Cropper only noticed that with the attack of fever he had diarrhœa from which he succumbed. He calls the disease pernicious malaria. The most interesting part was the examination of the blood. It should be said that the first portion of the paper was written before reading the Laucet. The following is a description of the case and the plates given by him :

"A Samaritan, aged about 55 years, was admitted to the C. M. S. Hospital at Nablus, Palestine, on September 15th, 1907, for malarial fever contracted in the Jordan valley whence he had just come. On admission parasites were not more numerous than I had seen them previously in other cases—*viz.*, two or three in a field and of the sub-tertian type ; crescents were very few. The fever followed a tertian course and when high (103°F.), on the evening of admission sporulating forms were easily found. At 9 A. M., on the next day the temperature was down and most of the parasites were of the unimpregnated ring form. Early on the second day after admission the patient was seized with algide symptoms, the temperature in the mouth being below 95°, which was raised to 97°, with difficulty by hot bottles, etc. In spite of treatment, however, he never rallied but succumbed at midnight, having previously had diarrhœa ; there were no cerebral symptoms and he was able to answer his name to within two hours of his death. No post-mortem examination was allowed. Most of the slides were taken from the ear two hours before he died and were principally stained by Giemsa's method.

"The chief points worthy of note in the coloured plate are the following :

"1. *Clumping of red cells* containing pre-segmenting amid more rarely sporulating parasites in masses of from three to twenty-one, which so far as I know has not been previously observed in the peripheral blood, though it is commonly seen in the brain and other organs affected in pernicious attacks, after death. I can find no reference to this occurrence in Marchiafava and Bignami's account of pernicious malaria. I would conjecture that such masses must occur in the internal organs in intense infections, but that as a rule they are not seen, being eliminated or filtered out from the blood in the spleen or the liver, thus giving rise not only to enlarged spleen but also to bilious romittent attacks and malarial hepatitis. Where, however, other organs such as the brain, the kidney, the pancreas, or the intestinal walls are affected, cerebral symptoms, acute hæmorrhage and pancreatitis, etc., develop not to mention a gastric form which is often overlooked.......It occasionally but extremely rarely happens that the quartan parasite undergoes enormous increase in numbers and thus may prove fatal.

"In the figure has been shown a large mononuclear leucocyte containing in its protoplasm a red cell infected by a parasite which has not yet reached the sporulating stage: as noted by Marchiafava and Bignami, this only occurs with the sub-tertian and never in the case of the tertian and quartan parasite.

"2. *Unpigmented rings in extraordinary numbers,* infecting from forty to fifty per cent., of the red cells; of five hundred counted at random two hundred and forty-eight were infected and in some cases a simple red cell contained even six or seven rings.

"3. *A polymorphonuclear cell containing spores and melanin.* This only occurs in intense infections; usually the large mononuclears are above affected thus.

"4. *A large mononuclear leucocyte containing three sporulating parasites.* This is very rarely seen even in pernicious attacks.

"5. *A pigmented leucocyte containing twenty-five blocks of pigment or melanin.* Since each of these was the centre of a sporulating parasite, at a reasonable estimate at least two hundred to two hundred and fifty spores had been ingested by this one cell which has enormously hypertrophied as a result of such overfeeding. The greatest numbers of spores in any one sporulating body was eighteen in this case, or on an average eight to twelve.

"6. *A red cell containing three sporulating forms.* This has only once been seen in this series, though I have several times seen two. I may add that one could find no trace of the endocorpuscular conjugation described by some authors, and it would seem likely that where a red cell is infected by several rings, each parasite follows out its life-history independently of the others even when one is a schizont or segmentating form and the other a gametocyte.

"7. I have also drawn a series of immature crescents, differentiating the male and female forms as far as possible. The number of these increased enormously on the last day, and it would appear that on the onset of algide symptoms with the temperature under 95° in the mouth and the extremities icy cold to the touch, some sort of migration of the gametes took place from the bone marrow. In any case the occurrence of these immature forms is very rarely seen except in the bone marrow or in the blood of internal organs. The young *male* crescents are in some cases almost or quite circular and often surrounded by some hæmoglobin; the chromatin may occupy any position in the cell and may even exist as a band across the 'equator.' The pigment is in all cases discrete and never gathered into a block, as occurs early in the segmenting forms. This is also true of the female forms, which are more pointed; practically none of them have taken on the crescentic shape which is such a characteristic feature later. Figures of twin-crescents and a crescent and sporulating form in the same cell, the so-called gameto-schizont (of Schaudinn) are also given.

"*The general condition of the blood deserves attention.* There was evidently a considerable leucocytosis, though I regret that no count of white cells was made in the fresh blood. Nucleated red cells were fairly common. The differential leucocytes count is as follows: neutrophiles 40 per cent.; large mononuclear, 21 per cent.; large lymphocytes, 26 per cent.; small lymphocytes, 12 per cent.; eosinophiles, 0·5 per cent.; and mast cells, 0·2 per cent.

"Though cases of black water fever have from time to time been recorded in Jerusalem and elsewhere in Palestine, this is the first and only true case of pernicious malaria that I have met with amongst nearly 500 cases diagnosed microscopically, quite 30 per cent., of which were sub-tertian infections, in two and a half years which strengthens my belief that a comparatively high average of daily temperature is necessary for the development of pernicious attacks. Tropical heat is rarely experienced for long in any part of Palestine with the exception of the Jordan Valley, which is sparsely populated and chiefly by Bedduin who must be at any rate partially immune."

The interesting observation of Dr. Cropper supports our observation on mal-anæmia. The material point of agreement is that this variety of pernicious anæmia has been mostly observed by us in quotidian fever without enlargement of the liver or spleen. It is necessary to observe that the term mal-anæmia has been given by us extending the word mel-anæmia given by other writers, and supported by Drs. Chevers and M'cConnel. We extend the meaning of the term for the purpose that mel-anæmia does not truly signify the disease. In certain cases where Europeans are attacked with malarious fever, their colour becomes rather black and hence the use of the term from melanin. But with the inhabitants of the soil, the colour becomes rather shallow and pale. For this reason the word mal-anæmia has been adopted. It would be preferable to use this term in exclusion of pernicious malarious fever, for it is a condition of the sub-tertian or quotidian type and may come on at any stage of the disease. Pernicious malarious fever, perhaps, happens to create a new variety as distinguished from the ordinary malarious fever.

The following suggestive note is taken from the *British Medical Journal* of July 18th, from a paper by Dr. J. A. Gunn, "On action of Arsenic on Red blood corpuscles, and a Theory of the Blood defect in Pernicious Anæmia."

"Theory of the Blood Defect in Pernicious Anæmia.

The etiology of idiopathic or pernicious anæmia is still obscure, and therapeutic measures are correspondingly inadequate to combat the disease. In these circumstances any reasonable suggestion bearing on its pathology or treatment may have some value.

Pernicious anæmia in regard to blood abnormality is characterized especially by a great diminution in the number, with generally a high individual hæmoglobin value of the red blood corpuscles. It presents in this respect a striking contrast to simple anæmia, in which disease, while the number of the red blood corpuscles is not conspicuously lessened, each individual erythrocyte is markedly poorer in hæmoglobin than are the red cells of healthy blood.

In the case of simple. anæmia, though the ultimate etiology of it may be debated, this at least is generally accepted, that there is for some reason a deficient supply to the blood forming organs of material available for making hæmoglobin, and that this defect of material can be made good by the therapeutic administration of iron.

The facts that in pernicious anæmia, there is found abundance of iron in the liver and in other organs, and that iron is useless as a remedy, would seem to show that in this disease the defect does not lie in the hæmoglobin factor of the corpuscles. Moreover, each erythrocyte contains in many cases a quantity of hæmoglobin in excess of that which is found in the erythrocytes of healthy blood.

May the defect not lie in the other constituent of the red cell—the stroma? There may be supplied to the blood-forming organs in a patient suffering from pernicious anæmia a deficient available quantity of those materials which go to form the stroma of the red blood corpuscles. There is present, as it were, in the body hæmoglobin enough, but not enough material for stroma in which the hæmoglobin may find place.

The stroma of the red blood corpuscles consists largely of lecithin and cholesterin. The condition known as pernicious anæmia may be due to a deficiency in the body of lecithin or cholesterin, and the administration of these substances may be of some use as a remedy.

Certain facts go to show that there may be some defect in the stroma of the red cells in this disease. For example, they do not run in to rouleaux in normal fashion. It has been shown that bodies suspended in a watery solution run into rouleaux only when possessed of a fatty covering. The absence of this phenomena in pernicious anæmia may be due to a defect in the stroma of the red blood corpuscles, in the lecithin and cholesterin elements, which though not true fats are yet of a fatty nature. The condition of poikilocytosis and abnormal staining of the red cells, sometimes present in pernicious anæmia, may be due partly to the same defect.

On such a hypothesis of the blood defect in pernicious anæmia the result of its somewhat emperical treatment may possibly be explained. The giving of bone marrow recommended by Fraser may be merely a method of supplying to the blood-forming organs those constituents of stromœ which they lack. Lecithin is certainly known to exist naturally in the bone marrow. Arsenic which since its introduction by Byrom Bramwell in this disease, has been found to benefit a certain number of cases, may act on the stroma of the red blood corpuscles in such a way as to remedy this defect and increase their resistance. Indeed, lecithin has been found to increase the number of the red cells, and some experiments which I have made with regard to the action of arsenic on these cells have gone to show that it increases their resisting power.

Nor is there any inherent reason, if a deficiency of iron, for example, or of calcium can cause morbid conditions, why disease may not also be set up by a lack of such necessary constituents as lecithin or cholesterin."

The writer has tried to differentiate between ordinary anæmia and pernicious anæmia. While there is absence of hæmoglobin in ordinary anæmia, it is not so in pernicious anæmia. In many cases of it there is excess of hæmoglobin. He finds defect in the stroma-forming material of the red cells. The hint is no doubt very suggestive but to accept it will be premature. What we can do is to carefully treat these cases from that point of view.

The use of arsenic in pernicious anæmia is as old as the days of Hahnemann or perhaps even before his period, it has been so used in the ancient Indian schools of medicine. The use of arsenic in pernicious anæmia and not quinine is another suggestive hint, which homœopathy has accepted since the days of Hahnemann. The confusion to understand the respective action of quinine and arsenic is a weak point in the allopathic practice. The mixture of quinine and arsenic in a prescription is a worst form of treatment. We have used minute doses of arsenic in the first stage of malarious mal-anæmia and it has no doubt proved a success. Much reliance can not be placed on it when the case has advanced. Crotalus, Elaps, Lachesis, etc, may hope to see better days in the treatment of the formidable disease.

DYSENTERY.

(Continued from page 240.)

Euphorbia Amygdaloides. *Stool.* Difficult from painful spasm of anus, which continued after stool. Fæces small lumpy, slimy; with prolapsus, though there had been no straining. Dark brown, watery, mucous stools, sometimes mixed with solid fæces, sometimes offensive, sometimes with blood, mostly in afternoon from 4 to 10 p.m. If it last two or three days, there is prolapsus, returning very gradually; if replaced within half an hour bowel generally prolapses again; if dysentery lasts longer, external piles appear, not returning with prolapsus. *Before stool.* Painful spasm of anus. Griping. *During stool.* Painful spasm of anus. Prolapsus of anus. *After stool.* Painful spasm of anus. Prolapsus of anus.

Rectum and anus. Painful spasm of anus. Prolapsus of anus.

Accompaniments. Nausea, worse from moving about indoors, better from sitting still, and better by supper. Sensation as if a long worm writhing in region of transverse colon or duodenum.

Remarks. Euphorbia Amygdaloides is useful in spasm of the anus and prolapsus anus. It should be used when Podophyllum fails.

EUPHORBIUM is the resinous exudation or juice of Euphorbia Resinifera. *Stool.* Fatal dysentery. Dysenteric stools with burning in anus, distension of abdomen and pain as from internal soreness. Stool preceded by itching in anus and urging. Dysentery with tenesmus. Bloody stools. Diarrhœa with tenesmus and sore feeling as if dysentery were coming on. *Before stool.* Itching in anus. Urging. *During stool.* Burning in anus. Tenesmus.

Rectum and Anus. Burning sore pain about rectum. Burning in anus. Tenesmus.

Accompaniments. Salivation with shuddering, inclination to vomit, and pinchings in stomach. Burning pain in throat (as from hot coal) to stomach, accompanied by heat (as if a flame were rushing out), anxiety, trembling and water-brash. Hiccup. Vomiting with dysentery spasmodic colic, flatulent, with pain as if tissue were being separated, or of pressure upward, generally better by supporting head on knee and elbow. Burning pain in abdomen.

Remarks. Euphorbium may be used in sudden, violent form of dysentery with the peculiar burning pain in the stomach or burning in the abdomen.

EUPIONUM is a volatile oil obtained on distilling wood tar. It is a medicine for hæmorrhagic dysentery. The following symptoms will help its selection : Nausea. Vomiting. Tenesmus, feels better when blood is passed, though it weakens her. Bloody stools. It is a medicine mostly applicable to females. Spasmodic pain begins from rectum and radiates up and down into vagina and uterus.

FERRUM. *Stool.* Discharge of blood and mucus after stool. Slimy fæces. Ascarides in rectum discharged with slimy stool. Chronic dysentery. Worse at night. Mucus looks like intestinal scrapings. Flaky mucus. Slimy and bloody stools.

Rectum and Anus. Hæmorrhoids, both blind and fluent. Tenesmus. Burning in anus. Prolapsus recti of children.

Accompaniments. Vomiting after taking acids. Cannot eat or drink anything hot. Vomiting of food especially at night.

Cramps in stomach after eating or drinking. Inflated abdomen. Soreness of bowels when touching or coughing.

Remarks. Ferrum is mostly applicable to chronic dysentery, either in the amœbic or that which comes after chronic dyspepsia. It serves good purpose in ulceration of the stomach or bowels, having mucous stools mixed with blood.

FERRUM PHOSPHORICUM. *Stool.* Dysentery with violent fever; fever continues; dysentery worse from pressure on stomach; no tenesmus. Stools, pure blood; bloody mucus or slime; worse from midnight to morning. Stools, pure blood, bloody mucus, bloody scum. Yellowish, whitish, brown stools, with blood. No pain. Blood dark or light.

Rectum and Anus. Disposition to prolapse. Piles.

Accompaniments. Great vomiting. Retching. Hæmatemesis. Vomiting with pain in stomach. Pain in stomach worse after eating and by pressure. Distension in hypochondria and region of stomach. Intolerance of clothes touching abdomen and chest; throws them off at night. Urine spurts out with every cough.

Remarks. Ferrum Phosphoricum is of use in cases of bloody dysentery with no pain but fever being present. The aggravation is from midnight to morning.

GAMBOGIA. *Yellow and green diarrhœa, mixed with mucus, preceded by cutting around umbilicus* (Aloe). *Frequent diarrhœaic dysentery, with discharge of green mucus, preceded by pinching in abdomen.* Dysentery with burning pain and tenesmus of rectum, protrusion of rectum and pinching around umbilicus, sometimes with discharge of flatus. Dysenteric diarrhœa; offensive, frequent, and copious, *coming out all at once,* and affording relief. *Before stool.* Cutting around umbilicus. Sudden urging. Pinching in abdomen. *During stool.* Burning pain in rectum. Tenesmus of rectum, protrusion of rectum. Pinching around umbilicus. *After stool.* Relief on stool coming all at once. Burning in anus.

Rectum and Anus. Burning pain of rectum. Tenesmus of rectum. Prolapsus ani.

Accompaniments. Nausea. Vomiting. Ulcerative pain in stomach passing off after eating. Rumbling in abdomen. Inflation and accumulation of flatus (Aloe). Pinching in umbilical region. Frequent emission of flatus.

Remarks. Gamboge is a medicine for chronic diarrhœaic dysentery mixed with blood. Like Aloes it resembles in suddenness of the evacuation, which is almost expelled in one gush. The medicine serves the purpose with these symptoms in chronic amœbic dysentery.

GELSEMIUM. *Stool.* Dysentery after sudden emotion, grief, fright or bad news; also in anticipation of any unusual ordeal. Urging to stool caused by exciting news, stool papescent, dark yellow, or yellow stool mixed with mucus. Stools cream-coloured, clay-coloured, or green mixed with mucus and blood. Painless. Involuntary. *Before stool.* Urging.

Rectum and Anus. Piles returned with raw smarting. Paralysis of sphincter ani. Prolapsus ani.

Accompaniments. Tongue so thick that he could hardly speak. Sensation of emptiness and weakness in stomach or of oppression, a feeling of a heavy load. Hiccup worse evening. Nausea. Gnawing pain in transverse colon. Sensation of soreness in abdominal wall. Rumbling in abdomen with discharge of wind above and below.

Remarks. Gelsemium is suitable to cases of dysentery or diarrhœa when it follows sudden emotion as from grief, fright, bad news or in anticipation of an unusual ordeal. In acute dysentery, with fever, thick coated tongue and without thirst, it is generally applicable. Indeed, there are a few cases which come under the sphere of Gelsemium.

(To be continued).

METEROLOGY AND DISEASE.

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

For the Month of June, 1908.

Date.	Barometer. (corrected.)	WIND.		TEMPERATURE.		Humidity.	CLOUD.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·595	S	4·0	100·2	82·5	84	10	*Nil*
2	29·634	S	4.0	100·5	84·5	79	7	„
3	29·655	S	4·4	101·0	83·8	71	7	„
4	29·606	S	5·1	101·5	80·0	71	7	0·08
5	295·67	S	6·9	99·2	86·0	68	4	*Nil*
6	29·594	S	7·4	100·5	86·2	79	9	„
7	29·622	S	6·5	98·0	76·8	71	10	0·30
8	29·693	S	4·9	96·0	82·5	72	10	*Nil*
9	29·631	S	3·6	99·8	81·8	74	8	„
10	29·593	S	4·4	101·2	84·0	72	6	„
11	29·592	S	5·8	100 2	83·8	64	2	„
12	29·597	S	6·9	100·0	85·8	71	4	„
13	29·573	S E	7·9	101·8	85·0	70	*Nil*	„
14	29·570	S E	3·0	103·1	86·0	77	4	„
15	29·567	E	4·6	101·0	84·0	82	6	„
16	29·514	Calm	3·5	95·8	81·5	85	9	0·16
17	29·456	E	2·8	95·0	80·0	93	10	0·55
18	29·368	W	5·2	86·2	77·0	100	10	12·90
19	29·378	Variable	5·2	79·5	76·0	95	10	5·83
20	29·439	W	4·8	80·0	77·0	91	10	2·11
21	29·467	W	3·7	81·2	77·5	95	10	1·05
22	29·486	S	2·8	87·2	78·0	79	8	0·01
23	29·402	E	3·2	88·5	79·0	93	9	1·80
24	29·412	S	6·3	87·0	78·5	91	9	0·02
25	29·514	S	6·7	89·0	78·8	91	8	0·08
26	29·595	S	4·7	89·0	80·5	84	8	0·08
27	29·623	S	4·0	90·0	80·8	86	7	0·27
28	29·565	S	3·8	93·5	81·0	82	7	0·14
29	29·531	S	4·2	95·5	81·5	77	6	*Nil*
30	29·556	S	3·6	93·5	81·0	84	7	1·12
Mean	29·543	70S3°E	4·8	94·5	81·7	81	7	TOTAL 26·50

The Barometer was shewing a further increase of the atmospheric pressure in the month of June. The mean pressure in Jan. 30·070 inches, Feb. 29·935, March 28·841, April 29·730, May 29·664 and June 29·543. The mean direction was more South than East. The mean velocity of wind per hour in miles was 4·8. The mean maximum temperature was 94·5; the mean minimum 81·7, shewing a difference of 12·8 degrees, less than that of the last month. Our view is, that the greater difference between the maximum and minimum temperatures generally shews greater unhealthiness of the locality. Humidity was 81 per cent. on account of the greater fall of rain than before. The total was 26·5 inches. In May, it had been only 6·56. The rainfall of four days 18th, 19th, 20th and 21st made up the total of 21·89 inches. It was undoubtedly a heavy rain in Calcutta.

Cholera did not shew any sign of increase during the month. During the week ending the 30th May, the mortality was 81. In the week ending the 6th June, it was 52. In the week ending the 13th June, 42. In the week ending the 20th June, 48 and in the week ending the 27th June, it came to 49. It seemed that after a havoc of four months, due to the influx of pilgrims in Calcutta, the city at last paid the ordinary penalty.

Plague shewed less mortality during the month of June. In the week ending the 30th May, it was 60. In the week ending the 6th June, 45. In the week ending the 13th, 35. In the week ending the 20th, 36 and in the week ending the 27th, 14. It seemed that plague was declining with the appreciable fall of rain. It was not so with cholera, which was though in a less active state during the month but the rate of attack was nearly the same during the four weeks.

With regard to the mortality of small-pox, during the first three weeks of May, it was gradually declining. In the last week of the month there was a little increase. In the week ending the 30th May, the mortality was 20. In the week ending the 6th June, it was 25. In the week ending the 13th, 9. In the week ending the 20th, 7 and in the week ending the 27th, 5. It may be said that the rainfall in June had a powerful influence in obstructing the spread of small-pox.

Mortality from fevers was almost at an even rate during May. In the week ending the 30th May, the mortality was 104. In the week ending the 6th June, it was 98. In the week ending the 13th, 87. In the week ending the 20th, 85, and in the week ending the 27th, 97. There was evident decrease of the mortality during the middle period of the month, but in the last week, it again increased. The increase may be due to the continuous rain during the month.

Deaths from bowel-complaints were on the increase during the last week. In the week ending the 30th May, the mortality was 30. In the week ending the 6th June, it was 30. In the week ending the 13th, 9. In the week ending the 20th, 31, and in the week ending the 27th, 46. It may be said that the continuous rain at last increased the death rate.

During the above mentioned four weeks, the respective mortality was 457, 386, 374 and 419, making a total of 1636. The ratio of death per thousand population was 25·0. It is evident, how some of the diseases decrease and the others increase by the heavy rainfall. In the month of May the ratio had been 37·8. Considering the decline in mortality of the two months it was 12·5 per thousand population. The diminution was principally due to the lessened mortality of cholera and plague.

Correspondence.

DISEASE IN INDIA.

Sir,—May I be allowed to draw the attention of your readers to a return moved for in the British House of Commons by Sir William Collins, M.D., M.P., and issued by the India Office on May 30th this year? This return gives the mortality from smallpox and cholera in India for the 30 years ending with 1906 and the plague deaths since 1896 (the year of the first outbreak). The total mortality from these diseases for the 30 years is as follows :—

1877	808,489	1887	534,195	1897	758,978
1878	610,208	1888	356,762	1898	296,759
1879	561,210	1889	542,449	1899	323,989
1880	188,037	1890	407,231	1900	958,367
1881	232,458	1891	678,096	1901	597,021
1882	426,470	1892	819,026	1902	792,444
1883	473,861	1893	280,008	1903	1,090,992
1884	614,595	1884	563.693	1904	1,186,077
1885	454,576	1895	355,168	1905	1,453,569
1886	256,178	1896	608,503	1906	1,100,457.

The tremendous increase in the mortality for the years 1903, 1904, and 1905 was due to the plague deaths which rose from 2,219 in 1896 (the first year of the outbreak) to 684,445 in 1903 ; 938, 010 in 1904 ; and 940,821 in 1905. In 1906 the plague deaths fell to 300,355 but the cholera deaths rose to 690,519, bringing the total mortality again considerably over a million. Smallpox in 1906 was also worse than for several years previously, although the annual deaths have never fallen below 42,000 in any year and only three times since 1877 have they been less than 50,000.

Taking each diseases separately, first as regards plague. The return shows that plague has been epidemic in India for 11 years. During that time Haffkine's plague serum has been very widely used and yet the deaths have risen from 2,219 in 1896 to 940,821 in 1905. Of what use has Haffkine's serum been in controlling the disease? The following figures show the annual mortality from plague since 1896:—2,219 ; 47,974 ; 89,265 ; 102,369 ; 73,576 ; 236,433 ; 452,865 ; 684,445 ; 938,010 ; 940,821 ; 300,355 ; making a total of 3,868,332 deaths !

Then taking cholera next. The deaths in 1906 from this terrible disease were more than in any of the preceding 29 years with the exception of 1900 and 1892 when they were 797,222 and 726,367 respectively. I see it reported in "The Lancet" (London) of June

27th that cholera is very bad in the coal district just now and that Mr. Haffkine has gone to Jherria to perform cholera inculations. When will this insane desire to control disease by spreading it die out?

Lastly let us consider smallpox. This disease has caused 3,334,225 deaths during the 30 years for which the return was made, an average of 111,140 per annum. In spite of the enormous amount of vaccination reported every year in the Indian Government Reports, the number of deaths from smallpox in 1906 was nearly as any as the average for the 30 years (being 109,583) showing that vaccination has no power whatever over smallpox.

It may be urged that those terrible scourges do not materially affect the general death rate in India. I have before me the figures for the years 1885-1906 and the general death rate per thousand for these years is as follows:—26.37; 25.51; 28.03; 26.4.; 28.21; 30.12; 28.4; 32.51; 25.75; 33.98; 28.94; 32.04; 36.03; 25.56; 30.01; 29,45; 31.67; 34.91; 33.05; 36.14; and 34.83. If the figures given earlier in my letter are compared with these it will be seen that, generally speaking, a marked rise in the mortality from smallpox, cholera and plague combined, is followed by a rise in the general death rate. For one or two years this is not so, but, taking the years generally, it is.

What then, do these figures show? First, that the general death rate in India is higher by a good deal now than it was in 1885; secondly, that in spite of an enormous amount of vaccination, smallpox is no more controlled now than it was 20 years ago; thirdly, that in spite of huge sums being spent and a large staff maintained for plague inoculations, the mortality from plague steadily rose from the year it broke out (with a decline in only one year) until it reached nearly a million deaths in 1905; and finally, that the serum treatment in India is an absolute failure.

Cannot the Press in India be induced to take up the subject of inoculation for these terrible diseases? Surely figures such as those given in the return alluded to must prove the worthlessness of vaccination for smallpox and of plague inoculation, and then there is also the question of their injuriousness. The House of Commons had before it some time back a Parliamentary paper referring to the deaths of some natives after plague inoculations; while we in England with our, comparatively speaking, small population, had 29 deaths of infants in 1906, from cowpox and other effects of vaccination. This does not nearly represent our vaccination fatalities and in India there must be many more.

Zymotic diseases are caused by bad food, famine, overcrowding, bad drainage, neglect, dirty houses and impure soil, lack of pure water, and filthy surroundings. Alter the sanitary conditions as we in England altered them by the passing of the Public Health Act of 1875 and you will gradually wipe away these fearful scourges. The difficulties one knows, are immense, and the problem is one of the largest our rulers have to face, but a start could be made by turning the present plague inoculation and vaccination staff into a sanitary staff and using the money now being wasted on inoculations in teaching those who can pass the knowledge on to their own fellow-countrymen the elementary rules of health. There are doubtless religious and other difficulties in the way and the famine is a potential cause of disease, but no marked reduction will be seen in the deaths from zymotic disease until inoculation is barred and sanitary laws observed.

50, PARLIAMENT STREET,
London, July 24th, 1908.

Yours obediently,
CHARLES GANE.
(Hon. Sec. National Anti-Vaccination League.)

[The above remarks are so cogent, reasonable and true that they do not require any man with common understanding to make any effort to be impressed with them. The whole question can be simplified into Sanitation *versus* Inoculation. By adopting the scheme of wide spread inoculation, the Indian Government has set its face against sanitation. Haffkine's inoculation of the prophylactic serum against plague has proved a failure. The inoculation to prevent small-pox has a worse position. After thirty years of inoculation, the attack of small-pox has not at all abated. Those who can save themselves, they do it by observing the laws of sanitation. The municipal department of Calcutta believes in the periodic attack of small-pox. In other words, they express their inability to restrain the attack of the disease. C. J. M.]

EDITOR'S NOTES.

Pink Urine.

The *British Homœopathic Review* for July writes :

" The urine of patients is sometimes of a very abnormal colour, and this may be due to various causes. Thus it may be blue from the ingestion into the stomach of methylene blue given medicinally or taken accidentally. Sometimes it is of a bright red colour. This may, of course, be caused by the presence of blood. But the *Journal of Clinical Research* for May mentions another cause. Some cases have been recorded in which this colour has been due to the eating of pink sweets, in which the colouring matter used by the confectioner has been eosin. The eosin is passed in the urine almost unchanged, and it depends on the number of pink sweets eaten how red the urine will be. The urine begins to be tinged with the red colouring matter within an hour of the sweets being eaten, and it may remain coloured the rest of the day, and possibly the next. The urine is often slightly opaque, red, and fluorescent in certain lights. The best test for the pigment is the spectroscopic one. The condition is a harmless one. The urine may also be of a pink, magenta, or brownish colour, from the presence in it of hæmatoporphyrinuria. This is generally owing to intoxication by sulphonal or trional, but is occasionally due to other causes."

There are dangers in the ingestion of some of the colouring matters. Those which are taken for our daily food as turmeric, etc., are generally innocuous. Saffron which is used in *polao,* or an agreeable mixture of rice, meat, butter and condiments, is not always a safe colouring matter. Cases have been observed in which bloody urine has followed. The aniline dyes are worst of the lot. They generally contain dangerous poisons.

Anaphylaxy.

The *British Homœopathic Review* for July, has given an account of our natural resisting power to toxic influences and its lessened resistance :

" Anaphylaxy is the name given by Professor Ch. Richet to the condition of lessened resistance to the action of toxic substances caused by repeated doses of them. It is the opposite to mithridatism. This phenomenon is very plainly observed with the venom of the sea-anemone. This poison is extracted from the nematocyst cells which from a microscopic secretory and inoculating apparatus for this species of Cœlenterates, which, though fixed to the rock, by means of this organ obtains possession of the prey which passes by. This poison has been called *Congestin* by M. Richet, because of the intense congestion which it produces in all the abdominal viscera, but especially in the intestine. Analogous poisons can be extracted from the bodies of many marine animals, such as mussels, for example. The minimum fatal dose of congestin for a dog is 0·075 gramme per kilogramme of body-weight. A larger dose causes diarrhoea, tenesmus, and a great fall of temperature; finally bloody stools, and still greater fall of temperature, and death in about three days. Recovery takes place from a smaller dose. If one of the dogs that have recovered from an intoxication by active congestin is injected with only one-twentieth of its former dose, grave symptoms of poisoning immediately follow, and if this second dose should be as great as only one-seventh of the primary dose, the result will be fatal. The length of duration of this condition of increased susceptibility, or anaphylaxy, varies with the different poisons producing it. With actinocongestin, the poison of the sea-anemone, it is at its height on the fortieth day, and lasts at least two and a half months. To the period of anaphylaxy succeeds a period of immunity."

The plain fact is, under the influence of drugs two different conditions may follow. The one in which there is rapid elimination of the poison. There even repeated doses of any poison can not produce the fatal effect. In the other case when elimination of the poison does not take place, there the fatal issue soon follows. Further all animals are not equally susceptible to the influence of the same poison. In hydrophobic inoculation birds are generally refractory, though the poison remains latent in the brain substance. Maceration of the brain substances thus inoculated, injected in the body of any quadruped animal will produce hydrophobia. For this reason, it can be inferred that different poisons act powerfully on different animals.

Prof. Richet applies the word anaphylaxy to the condition of lessened resistance to the action of repeated doses of toxic substances. It may be that the same animal injected with the same poison a second time will not prove refractory to the poison. He does not take into consideration why repeated doses of any toxic substance will increasingly lessen the power resistance. Then again why anaphylaxy is succeeded by immunity. They are most important questions to be considered.

Cerebral Abscess.

The *Medical Times*, August, writes :

"Cerebral Abscess, in fully 37 per cent. of all cases, results directly from an extension of an infective process from the middle ear ; and of these 37 per cent. four-fifths are caused by middle ear suppuration. It is therefore most important to treat this latter condition and thus avoid involvement of structures adjacent to the middle ear. J. F. McKernon (The Laryngoscope, Jan., 08) warns the attending physician to examine well the middle ear. Something more may be necessary than to give instructions for the ear to be syringed out by some antiseptic solution. Drainage may eventually become obstructed : and the retained pus may involve the mastoid bone or one or more of the intracranial strictures, thereby endangering the patient's life."

It has generally been noticed that suppuration of the middle ear on being chronic affects the mastoid bone. It is no wonder that cerebral abscess is caused by the metastasis of the suppurative process. In India, suppuration of the ear is neglected, for cerebral abscess is of unusual occurrence.

Looking Backward. Lachesis.

From the *Homœopathic Recorder* for July, we derive the following information :

"Looking over old books and journals to arrive at the truth of the muddled *Lachesis* affair revealed some rather interesting points. The documentary evidence alone concerning the name would puzzle a Philadelphia lawyer and drive any jury to disagreement. Mr. A. L. Ditmars, Curator of the Broux Zoological Park, where the poison of the new Lachesis snake was extracted, testifies under oath, as follows :

'This is to certify that Messrs. Boericke & Runyon, homœopathic chemists of New York City, delivered into my custody for verification and manipulation a serpent purporting to be a lance-headed viper; that I made critical and complete examination of its generic characteristics, and found the same to be a perfect living generic specimen of a snake popularly known as the lance-headed viper; techincally embraced in the genus Lachesis; order, Ophidia; family, Crotalidæ; Latin synonym, Trigonocephalus Lachesis; habitat, Northern Brazil; conforming to the serpent mentioned in the Homœopathic Pharmacopœia, and specified therein as **Lachesis** Trigonocephalus; that I extracted from the said serpent a given quantity of venom, the whole of which venom I delivered on the 26th day of April, 1908, to the aforesaid Messrs. **Boericke & Runyon.**'

As Mr. Ditmars is without prejudice in the matter, and is undoubtedly one of the best living authorities on snake, this testimony determines the fact that the new snake is a specimen of the Lachesis trigonocephalus. The fact that that all homœopathic pharmacopœias, and nearly all our text books, give that name for the Lachesis proved by Hering seems to demonstrate that the alleged new supply of Lachesis is genuine.

Hering himself seems to have been confused about the name. In his *Condensed Materia Medica* he gives it as "Lachesis Surukuku." In November, 1852, he contributed a paper to the November number of the *North American Journal of Homœopathy,* then published by William Radde, and edited by Drs. Hering, Marcy and Metcalf. The title of the paper is "On Psorinum and Its Chemical Rescue." In this paper he discusses the events of his proving of *Lachesis.* He writes:

'On the 28th of July, 1828, I first received the poison of the Trigonocephalus lachesis, which I immediately triturated and commenced taking and administered to others in good health, and also to some patients. The results of these investigations were first transcribed on the 18th of June, 1830, and sent to Staph, who now printed my former communications and those subsequent researches. (*Arch.* X., 2, S. 1 und 24, 1831.) I mention this to show that neither I nor Staph was in too great hurry; we both took our time.'

This was written in the year 1852, and the proving referred to was made in, or about, the year 1828, so presumably in the intervening time the specimen of the snake furnishing the poison was presented to the Academy of Natural Sciences, Philadelphia, and it is labeled by Hering: "Lachesis mutus. Surinam. Daud. Dr. Hering." The snake so labelled is the one whose venom was proved and so, regardless of names, we have the means of positively identifying any new Lachesis that may be offered. The other Lachesis-snakes furnishing the remedy used to-day were identified by Dr. Hering; a comparison (they are all preserved in alcohol or glycerine) will show that they are of the same species, and, as Mr. Ditmars seems to be right, they are not *Lachesis trigonocephalus.* This name has been wrongly applied to them.

Thus it is that *Lachesis mutus* is the poison proved, and used for over half a century in Homœopathy, yet in all that time it has been named *Lachesis trigonocephalus* whereas the genuine *Lachesis trigonocephalus* is an unproved and therapeutically unknown remedy. This error will doubtless cause much confusion in the future, as it is universally incorporated in homœopathic textbooks and literature. We cannot say whose fault it was, but it is the duty of every homœopathic writer and journal to do what lies in their power to correct it.

The whole matter may be summed up as follows: The two snakes are of a different species. The proved poison is *Lachesis mutus.* The unproved poison is *Lachesis trigonocephalus.* Since its introduction the former has erroneously borne the latter's name."

The comparison of the preserved snake by Hering with that of the new trigonocephalus will decide the question. If the former be the L. mutus and the latter the L. trigonocephalus, then they are closely allied to each other. Their clinical difference may be few, but at any rate a new proving seems necessary.

Medicine and the Law.

The *Lancet,* July 18, records the following interesting note:

American Decision on the Rights and Liabilities of Medical Men.

"Although the decisions of the American courts are naturally not binding on the judges of our courts, yet the decisions are frequently cited when our law is silent on the subject, and more often than not followed. Therefore it is proposed to refer briefly to a few of the more important recent decisions relating to medical men, which might perhaps be of service in bringing or defending an action in this country. Where a patient desires a medical man to perform an operation and unexpected conditions are discovered in the course of the operation, or where an emergency arises calling for immediate action for the preservation of the life or health of the patient and it is impracticable to obtain his consent or the consent of anyone authorised to speak for him, it is the duty of the medical man to perform such operation as good surgery demands, without such consent. A husband placed his wife in a sanatorium for treatment. The physician in charge told him that a proposed operation on her would be a trifling one. The husband was willing that the physician should do anything that he thought necessary, but he requested that he should do as little as possible. The physician told the husband that two operations might be necessary. Following the conversation the physician performed an operation, and the wife left the sanatorium. She subsequently returned and the physician performed a second operation. It was held that the authority given by the husband to the physican to perform an operation was exhausted when the first operation was performed, and that the second operation was performed, without consent. Where a patient is in possession of his faculties and in such physical health as to be able to consult about his condition, and where no emergency exists making it impracticable to confer with him, his consent is a prerequisite to a surgical operation by his physician (Pratt *v.* Davis, 79 N. E. 562). In an action against a physician and surgeon for negligent treatment and want of ordinary care, where it appears that he attended a patient suffering from hip disease, and called another physician of experience in consultation, and they arrive at the conclusion that the thigh is dislocated and set the same, and place it in a plaster cast and visit the patient continuosly until he moves away from the city, using every precaution, but the treatment is not successful, the evidence does not show want of diligence or ordinary skill, and the surgeon is not responsible for want of success (Champion *v.* Kieth, 87 P. 845). Where one was injured on the street by an accident rendering him unconscious, and while he was in such condition surgeons summoned by an spectator attended and performed an operation on him in an endeavour to save his life, there is a quasi contract on his part to pay a reasonable compensation for the services (Cotnam *v.* Wisdom, 104 S. W. 164). Where the general manager of a corporation, on one of its employees being injured, directed an employee to call a surgeon, and placed the injured employee under such surgeon's care, and did not countermand the first employment, though he knew the surgeon was continuing to attend his employee, there was an employment of the surgeon as to his entire services (Freeman *v.* Junge Baking Co., 103 S. W. 565). The care and skill required by a physician in treating a patient are not "his best skill and ability," but he must use that care and skill which are exercised generally by physicians of ordinary care and skill in similar communities (Dorris *v.* Warford, 100 S. W. 312). A physician entitled to practice his profession, possessing the requisite qualifications and applying his skill and judgment with due care, is not ordinarily liable for damages consequent upon an honest mistake or an error of judgment in making a diagnosis, in prescribing treatment, or in determining upon an operation, where there is reasonable doubt as to the nature of the physical conditions involved, or as to what should have been done in accordance with recognised authority and good current practice (Stalock *v.* Holms, III N. W. 264). Evidence that an operation was absolutely necessary "on the chance" to save the life of the patient, and that the patient was operated on as claimed warrants an inference of a request on the part of the patient to have the operation performed, with an understanding that a reasonable compensation would be paid therefor (Pryor *v.* Milburn, 101 N. Y. S. 34). Evidence of defendant's wealth as an element to be considered in measuring the value of a physician's services is inadmissible where it is not in rebuttal of evidence from the other side attempting to show the custom of a lower standard. In an action by a physician to recover on an implied contract of a father to pay for services rendered to his son, where the physician knew of the financial standing of the father and son, evidence that the son was a man of considerable fortune and amply able to pay for the services is admissible on the question whether the physician thought the father intended to pay for the services which he called him to perform. Evidence of a physician's learning and skill is competent to be shown in estimating the value of his services. (Morrell *v.* Lawrence, 101 S. W. 571)."

In India the recorded cases of liability of medical men are so few and faulty, that no comment is necessary on those cases. Here the judges believe European medical men more than the Indians of the same profession, though their status may be unquestionable. On the other hand, the colour-prejudice of the European doctors imparts bad influence to the most of the cases where Europeans and Indians are concerned. The self-rupture of the spleen is an ideal discovery to save European lives. Self-rupture of the spleen is an impossibility.

CLINICAL RECORD.

Foreign.

A CASE OF SUBACUTE NEPHRITIS TREATED BY SERUM OF EEL.

By Dr. Picard.

Madam G.——,aged thirty-four, called me on the 3rd April, 1908. She was in bed for the last three days and complained of intolerable pain in the joints, which prevented her to make any movement. She had had six or seven years before a like attack and never had any other malady during the period.

On examination, it was ascertained that both the knees, wrists, elbows and the left shoulder were painful to touch, which prevented all movement. Only the articulations of the feet were not affected.

Had no fever. Nothing was found by auscultation. Urine, normal in volume and aspect. I found the case to be an attack of acute articular rheumatism, for which I advised cotton wadding on the swollen articulations and gave *Chininum Sulphuricum* in four powders of fifteen centigrammes each during the day.

On the following day the patient was in the same condition, and I prescribed the same medicine.

On the 7th April, the fifth day of treatment, she felt a little better. On that day the patient could move all the articulations without much pain. The swelling had disappeared. Nothing in the heart was found. Urine normal.

On the 8th April, the amelioration continued. The patient was much better than before. The menstruation appeared and was normal. I prescribed *Bryonia* 3 dec. ten drops in two hundred and fifty grammes of water, four spoons during the day.

On the 11th April evening, it was reported to me that since the evening the patient vomited all that she took for food; and moreover her face had swollen. I absolutely prescribed milk diet and told him to bring the urine.

April 12th. Urine scanty, about two hundred and fifty grammes in twenty-four hours, high coloured, turbid, presenting aboundant deposit. Examination disclosed a large quantity of albumen (the quantity was not estimated). The patient had slight œdema of the malleolar regions and the back of the hand, pronounced œdema of the face and swelling of the eyelids. She was in a slight stupor, and had no pain, but complained of frequent urination, with dull pain during which she passed scarcely a few drops of urine. On auscultation of the heart and lungs nothing was found. I prescribed *Cantharis* (M. T.) three drops and *Belladonna* (M. T.) three drops, separately in hundred and fifty grammes of water each, to be taken every hour alternately. The milk diet was continued. Perfect rest in bed.

April 13th. After twenty hours of treatment, amelioration followed. Urine scanty. Urination frequent and painful. Œdema of the malleolar regions and the back of the hand was little less pronounced, but œdema of the face increased. Vomiting more frequent. The stupor was more increased. (The patient could not give any account of his state, and had lost three months before a little child from uræmia in course of scarlatina. She dreaded much this affection). Nothing was found on auscultation.

Considering the gravity of the case, and especially *Cantharis* having done no good, I thought of giving the *Serum of Eel* as it resembled the symptoms. I prescribed the serum, first centesimal, ten drops in two hundred and fifty grammes of water, to be taken one spoonful every hour. The same liquid diet was continued.

April 14th. The urine increased in volume to about five hundred grammes. A little before my visit, she passed one hundred and fifty grammes of clear but red urine. The urination was not frequent and painful. Vomitings ceased. Œdema diminished, and the stupor was less. Nothing was found on auscul tation. I continued the *Serum of Eel*, 1st centesimal, ten drops in two hundred and fifty grammes of water, every two hours. The milk diet was continued.

April 15th. Urine about a litre. Amelioration continued. Œdema mostly dispersed, only a little swelling of the eyelids persisted.

April 16th. The amelioration was more pronounced. Diuresis continued. Analysis of urine presented albumen in small quantity, it was about 30 or 40 centigrammes. I advised to continue the milk diet and the medicine, the *Serum of Eel*, four spoonfuls only during the day.

April 19th. Urine normal about a litre in twenty-four hours, having no more trace of albumen. She had no more œdema, she could walk being helped to rise up and assisted in the movement. I gave lacto-vegetarian diet, and continued the *Serum of Eel.*

May 3rd. Nothing abnormal happened during the meantime. The patient had taken her food well. She had not any kind of treatment during the last ten hours. Urine was normal in quantity and colour. There was trace of albumen.

I have not seen the patient since but was told that she was doing well. No more trace of albumen was observed in her urine.—*The Revue Homœopathique Francais*, June, 1908.

HENOCH'S PURPURA

By T. E. Purdom, M.D., C,M., (Croydon).

Nora Bryan, aged 5, in October, 1906, complained of pains all over her, especially in the back; she was sick. A crop of macular spots came out over hips, lower part of back, and upper part of thighs posteriorly, varying in size, red, but soon fading off to a purple colour; very faintly seen after two or three days. There were a few very small purple spots on legs.

October 11.—I saw the child to-day. The general pains were much better. She now complained of gastric pains, intermittent, with tenderness over the epigastrium and right hypochondrium; the abdomen was tender generally; pain not very acute; occasional sickness; all milk vomited; tongue thickly coated, white and rather dry; bowels acting once or twice daily. *Ars. alb.* 3x and *coloc.* 2x, alternately, were given for her abdominal symptoms.

October 12.—In *statu quo.* Pains in abdomen colicky and intermittent; principal tenderness over pyloric region. *Ars., coloc.*

October 13.—During last night sickness increased; vomited matter was green, and mixed with pieces like curdled milk streaked with blood; several traces of blood were seen in what the child vomited. Tenderness over gastric area, though not severe; tongue dry and rather brown; slight hæmorrhage from vagina was noted. Previous health good; she looks sturdy, with dark hair. Sickness continues; green vomit, with traces of blood. Temperature normal; pulse 96; urine normal, save slight phosphatic deposit on boiling. *Ars. alb.* 3x.

October 14.—Complains of sore throat; tonsils and fauces red and raw, and partly coated with mucus; cervical glands not enlarged; temperature 97°; pulse 96; green vomit. The symptoms, apart from the throat, were suggestive of gastric ulcer, very rare in such a young child; gastritis also of some kind was suggested. *Ars. alb.* 3x and *bell.* 2x.

Evening.—Throat much better; tongue dry and brown; green sickness with traces of blood; purpuric patches; ecchymoses on both ears. Between 5 and 6 p.m. the child had two large stools, consisting almost entirely of blood. At 7-45 I found her pulse very rapid and hardly to be felt. The hæmorrhage from bowel was very dark, but not black; child very restless and partly stuporous. *Ars.* 3x, *chin.* θ 1 in 4; iced water, no food; saline injection.

October 15.—The little patient slept all night, though restless. Pulse 96; tongue moist and beginning to clear; no complaint of throat; *great thirst.* Milk one-third, water two-thirds, ice, *ars.* 3x, *chin.* θ.

7 P.M.—Pulse 88, intermittent; very restless; tongue dry; no sickness; no action of bowels; no further hæmorrhage; no fresh spots; pain and tenderness over epigastric and right hypochondriac regions; liver dulness extends beyond ribs; liver tender to touch; patient very fretful; not so thirsty; she has had frequent drinks of milk and water and iced water; no sickness. *Ars. alb.* 3x, *china* θ half-hourly in alternation.

October 16.—Restless night; complains of abdominal pain; brighter this morning; tongue clearing; temperature 98·4° F.; pulse quick, but partly from crying; bowels confined. Diet: bread and milk, rusk and milk, grapes.

October 17.—Pulse 80; tongue clearing; abdominal pain still; no action of bowels; fretful. *Hydrastis* θ *ars.* 3x.

October 18.—Much better; sitting up, playing with toys; tongue clearing rapidly; pulse 108-112, probably from erect position; bowels acted this morning after missing four days; very dark fæces with traces of blood. On right knee small crop of purpuric spots, and also over convex surface of both elbows, quite a marked crop. Some spots were ¼ in. in diameter and slightly raised. *Hydrastis* 1, *hamam* 1. Urine examined: a very large deposit of urate of soda and phosphatic crystals, also cystin and acid urate of ammonia; a few leucocytes; no red blood discs seen; a separate small deposit of albumin; kidneys probably congested.

October 20.—Much better; tongue nearly clean and quite moist; pulse 96-100 when sitting up; no abdominal pain; bowels regular; faeces rather black yesterday, but normal colour to-day. There is a fresh crop of purpuric spots over both hips and back of thighs; the child, however, seems well, sits up, and plays with toys. There is no hepatic or gastric tenderness now. *Phos* 4x ♏ss., *hydrastis* θ ♏i.

October 23.—Much better, downstairs, but has complained for two days of pain in the feet, which are swollen. The pain however, is better to-day; there are large ecchymoses under the external malleoli of both ankles and along the same side of the feet. Several fresh purpuric spots have come out on front of left leg near the ankle, a few also are seen on the right leg. The bowels are regular; stools normal in colour; urine looks clear.

October 24.—Urine examined: Slight phosphatic deposit, albumin one-tenth in test tube; a few red blood corpuscles are seen, no crystals. *Phos.* 4x ♏ss., *ars. alb.* 3x ♏i.

October 26.—Child well, but rather weak; she goes out now every day; appetite good; a few fresh purpuric spots are seen. *Ferrum. acet.* 1x. Urine examined: Albumin one-eighth, very little deposit otherwise; a few leucocytes, and one or two red corpuscles; some imperfect oxalate of lime crystals and a few epithelial cells.

October 30.—Keeps well but easily tired; another crop of purpuric spots below both knees; tongue clear; pulse normal; bowels relaxed this morning. To be kept warm and out of all damp and draught, and fed up well. *Ferrum phos.* 1x gr. ii., *phos.* 6x ♏ii.

November 6.—The patient is now feeling well and seems quite well, save a faint trace of albumin in the urine.

Remarks.—This child illustrates a somewhat unusual attack of purpura. It corresponds best to Henock's variety, as described by him in 1874. It is most common in children from 7 to 15; Nora is only 5. The only traceable cause was a very severe nasal catarrh with marked herpes labialis. The attack began very like purpura rheumatica, but afterwards the gastric and abdominal symptoms became prominent. The state of the child was very serious for a time, following the hæmorrhage from the bowel. This was probably intestinal, as blood from the liver would have been darker. The congested state of the kidneys, with albuminuria, made the attack more severe. There was no fever while I was attending the child, but the mother is sure she was feverish for a day or two before she sent for me.

Death has occurred in such cases from uræmia, arising from kidney complication. Perforation of the stomach has also been known to cause death. The symptoms at one time were very like gastric ulceration. The medicines used were *ars. alb.*, *coloc.*, *bell.*, *chin.*, *hydrastis. hamam.*, *phosphorus*, *ferrum*, *ferr. phosph. Ars. phos.* and *hamamelis* were given for the special blood condition, and are well indicated in purpura; *bell.* was given for the sore throat; *hydrastis* to help the action of the bowels; *coloc.* for the colicky pains; *china* as a tonic after the loss of blood; *ferrum* for the anaemia.—The *British Homœopathic Review*, July, 1908.

Gleanings from Contemporary Literature.

HUCHARD AND HAHNEMANN.

On June 10, before an audience of 300 persons, composed largely of physicians, Dr. Huchard, of Paris, made his declaration of principles in his clinic in the Lænnec amphitheatre, as follows :—

Therapeutics of the Past and the Future.

In our first lessons we studied especially pathology and clinical medicine. In our two last lessons, it has been especially a question of therapeutics, which is the art of medicine, that is to say, practice, as Aristotle said.

In this final conference I ask your indulgent attention, which I greatly need, since, upon the subject of cardiac diseases, I wish to bring before you a delicate and difficult question, the therapeutics of yesterday and to-morrow.

You know that of yesterday and to-day, with its uncertainties, with the richness of its medicines opposed to the poverty of its medication, with its incessant fluctuations, because it follows no precise law, and is neither commanded nor directed by any doctrine. It is unnecessary to say more.

I have mentioned to you the very weak doses of *digitalin* (two to four drops of the thousandth solution), by the aid of which you obtain upon myocarditis, a tonic action of the most remarkable kind. Well, a homœopathic physician, Dr. Sieffert, author of an excellent treatise on positive therapeutics, wrote to me on this subject, "That dose corresponds to the third decimal solution of our pharmacopœia, and we employ, voluntarily, doses stronger than yours." Now, here I am, enrolled in the camp of the disciples of Hahnemann! Upon this subject I am going to tell you exactly my thoughts.

Medicine should remain a school of tolerance and especially of modesty, for reasons, alas! known to us. It should not take on a superb attitude of pride in the face of adverse theories, because no one school should believe itself the sole depository of truth. Come whence it may, this truth must be accepted. "Truth requires much time to overcome the mind, it is never victorious until it shows itself," said the aged Fontanelle; even the circulation of the blood itself had, for a long time, its detractors, among whom was Riolan, who exclaimed, "I had rather err with Galen than believe with Harvey."

I.

In order to "juggle" diseases, according to a slang expression, we do not take sufficiently into account the collaboration of the organism, which makes and unmakes the different affections; we seek too much to suppress a symptom, when we should, above all, cause the disease to disappear, and ordinarily, we employ medicines in a too strong dose without knowing their action on the healthy human body. It has been, however, demonstrated, in the iron preparations, for example, and in many other remedies, that, beyond a certain quantity, the remedy passes through the digestive canal in the condition of a foreign and inert body, capable of obscuring or of retarding the work of cure. We know, and I said so a long time ago in the Therapeutic Society, that *hydrochloric acid* prescribed in hyperchlorhydria, only acted in small doses by its simple presence, and if one should order it to supply an insufficient gastric juice, it would take quantities that the stomach could never tolerate.

On this subject, in the meeting of the Academy of Medicine, April 26, 1859, Trousseau used the following language that we reproduce. Here are some passages that I give you to meditate on, and of which it is said with just reason by one of his opponents, that it was almost a homœopathic doctrine :—

"The question of the direct action of remedies and of their dose," said Trousseau, "are two questions that touch and are confounded with one another. For my part, I am not convinced that it is the remedy itself that is by a direct influence the therapeutic agent, and, consequently, I do not believe that the quantity of the substance administered is of the highest importance." And to show that medicines have a purely dynamic action, he cites the iron preparation, which, in the treatment of chlorosis, does not act by introducing into the blood the colouring matter of the corpuscles, but rather by modifying the assimilative functions. Heshowed also that *mercury* certainly does not act in syphilis by direct contact with each particular living particle.

Such was the opinion of Peter, who said that the action of certain remedies was rather qualitative than quantitative. M. Albert Robin expresses better still the same idea. "The remedy acts dynamically and not by its mass."

Very well, in all justice, I ask you if all this is not a paraphase of the following precept: "The necessity of taking a very feeble dose is in order that the dynamic power of the remedy should effect its purpose, not by its quantity but by its quality."

Again, the recent works of G. Lebon upon "the dissociation of matter and the evolution of force" show us that the atom is an immense reservoir of energy, which manifests itself exteriorly under the form of electricity or other modality of force, and it is known that doses prodigiously weak, of $\frac{1}{500}$ of a milligramme of the colloidal metals, are capable of causing physiological effects, characterized by an increase in metabolism and augmentation of the urea and uric acid. These bodies do not act directly, as Cullen asserted, but by their presence or catalytic action. Thus oxygen and sulphurous acids, which do not usually act on one another, unite to form sulphuric acid in the presence of a salt of platinum, without the latter coming chemically into the reaction. You take a body, pure, non-phosphorescent (sulphate of calcium, strontium, zinc, barium); if it is pure it will never be phosphorescent. If you add a millionth part of certain substances (bismuth manganate) it acquires that marvellous and inexplicable property of preserving light, that is to say, of becoming phosphorescent. From certain substances you take imponderable quantities of the manganese that they contain and they lose their properties of catalytic action. In biological chemistry we recognise to-day that all these bodies (enzymes, oxydases, diastases) only act by their presence.

It is this that is ignored—the importance of catalytic action in the chemistry of life. Remedies act not only by chemical action, but also, and above all, produce effects by their simple presence. In order that this should happen, large doses are useless and even injurious; the doses must be small, infinitesimal, so reduced that they correspond to the commencement of atomic dissociation.

However, the chemical action not being always invoked, it is the physical activity that predominates in directly stimulating the organism, and the metallic ferments seem to reinforce the chances of the struggle against infection if they do not act upon the infectious germ itself. But the specific remedies like *mercury* and *quinine* should always be administered in large doses.

Mineral waters are not alone supplied with radio-active properties; they contain also remedial agents, as for example, Vichy water and many others; they also contain different ferments. That is why they act otherwise and with greater power than if one prescribed these remedies and bicarbonate of soda in large doses.

The ions are the parts of molecules that biological or physical forces, like electricity, have liberated from their combinations. These liberated ions have exalted affinities that the ancients had seen when they spoke of bodies in the nascent state. The question of ionization of mineral waters is very important. "Has not one observed," said Albert Robin, "that the osmotic pressure of mineral waters is superior to that of a simple solution of the same salts in the same proportions?" Arrhenius from his researches upon electric conductivity was led to admit that in waters there existed a certain number of dissociated elements, to which the name of free ions was given, whose activity furnishes us with a new explanation of the therapeutic action so manifest, and to the present incomprehensible, of certain waters only slightly mineral, since the facility with which these waters give up their energy is more important than the quantity of their latent energy.

On the other point, in demonstrating to you the importance of functional troubles in diseases of the heart, I showed you that it was to them that therapeutics should be specially directed. Such is, without doubt, the opinion of my colleague, Albert Robin, whom I like to cite because we share the same opinions on many things, save blistering, in which, it has been remarked, we are only separated by the thickness of a plaster; he judiciously opposes to the gross anatomic organism, the functional organism, adding that "therapeutics should attempt to influence the functions if they wish to modify the organs." And it is in this spirit that he employs infinitesimal doses of $\frac{1}{100}$ of a milligramme of metallic ferments.

These examples become irrefutable arguments in favour of a new therapeutic evolution. Galen and Hippocrates have disputed for too long a time. We must strive to conciliate them. But we will not do so if we continue to study the physiological action of remedies upon animals by using strong and even toxic doses. We do not care so much to know what remedies do to cause death, as what they do to assist the organism to defend itself against disease. For, if it is important to know with Galen how it is attacked by it, I believe it is still more important to learn with Hippocrates how it is to be defended.

II.

It is necessary to know and admit that every medicine possesses two actions; primary action and secondary action, and that the latter is opposed to the former. Thus *morphine* causes, first, a slight elevation of the temperature, with increase of the pulse, diuresis and muscular force, then a diminution of the temperature, diuresis and muscular force. Likewise, *digitalis* causes, at first, oliguria, a slight tachycardia, with a lessening of the arterial tension, soon followed by the contrary phenomena; and thus it is that very large doses suppress the primary action, and produce from the first the secondary action, following the example of *strychnine* in large dose, which produces a paralysis without the preliminary tetanic effects. These facts confirm a therapeutic law that is well known. "Small doses increase vital activity, moderate doses reinforce it, strong doses often depress it, and excessive doses always suppress it."

We must know also and admit that all remedies produce in large doses an effect inverse to that realized by weak doses. Thus, *digitalis* tones or weakens the heart, according to the doses; *coffee* ordinarily becomes narcotic in low doses; *opium*, narcotic in usual doses, becomes excitant in small doses; *alcohol* excites in feeble doses and paralyzes in large doses, like wine, which sustains or annihilates the strength. *Bismuth* constipates in habitual doses, and according to Hayem, combats constipation in doses of 15 to 20 grammes. Nothing is more true than this antagonism of action between small and large doses. Thus Magendie and Pelletier formerly produced in animals the foci of pulmonary congestion and hepatization by weak injections of *emmetine*, while in a toxic dose Pelletier obtained a sort of pulmonary anæmia. Thus it is that at times, and without invoking a particular susceptibility or idiosyncrasy of the vaso-dilator nerves (which explains nothing), one has produced with *strychnine* and with 4 grammes of *ergotin* a certain febrile state with redness of the face, and, again, congestions with small quantities of *acetanilide*.

All this is absolutely exact. But that which is not, is the exaggeration of doses absolutely imponderable, that toward the close of his life, Hahnemann, in an access of illumination and mysticism had recommended a first dilution of 100th, a second of 10,000th, a third of a millionth, and the thirtieth expressed by one followed by 60 zeros. Thus we hear of cures of a chronic affection by a single dose of the 12,000th dilution. But a learned physician, P. Jousset, whose youthful ardour of 88 years cannot be too much admired, reproduces these exaggerations in an article whose title indicates sufficiently the spirit and the tendency, "Where we do not wish to go." He does not abandon the small doses nor the infinitesimals, and in some remarkable pages upon the "Constitution of Therapeutics" he shows judiciously a drop of Koch's *tuberculin* injected into the cellular tissue of a phthisical patient, mixed with blood in all the circulation, having passed through the liver and arrived at the tuberculous lesion in the lung in the state of an infinitesimal quantity, capable of lighting up an intense fever and killing the patient. And he adds, who will tell the weight of the diphtheritic toxin, after having been elaborated in the organism of a horse, that is contained in the serum of Roux?

III.

We arrive now at the Hippocratic doctrine of the law of similitude, old as medicine, that Pasteur has victoriously applied and sanctioned by his immortal discoveries. Hippocrates said: "Disease is cured by the similars that produced it." *(Similia similibus curantur.)* He also said, *vomitus vomitu curantur*, and he cured the cholera by *white hellebore*, which produced choleraic diseases, having united the example to the precept.

Centuries rolled away to Paracelsus, who modified slightly the formula *(simile sui simile curat)*, and to Stahl, who died twenty years before the birth of Hahnemann, and who, after having proposed to treat acidity of the stomach with *sulphuric acid*, wrote these lines: "The rule admitted in medicine to treat diseases by remedies contrary and opposed to the effects they produce is completely false and stupid. I am persuaded that diseases yield to agents which cause a similar affection." It is certainly false in many cases, because, as P. Jousset says, what is the contrary of pneumonia, typhoid fever or diphtheria? And since I speak of diphtheria, is not the antidiphtheritic serum a medication similar to the disease? To cure an infectious disease, Pasteur uses the microbe which gave birth to it, he employs the microbe in an attenuated dose, and he thus arrives at the experimental demonstration of the vaccine of Jenner, at the immunization and the curing of diseases by attenuated cultures of the microbes which led to another method of attenuation greater still, the discovery of serum-therapy by the serum of immunized animals.

Is it possible, then, to deny that the therapeutic discoveries concerning chicken cholera, tetanus, rabies, plague, typhoid fever, the bites of venomous serpents, have resulted from the law of similars? Do you not see that we are and have been unwitting Hippocratists, when Sennert formerly cured the sweating fever by sudorifics, when Piorry recommended *capsicum* for hæmorrhoids, when Trousseau established substitutive inflammation, when Lancereaux, after Rayner, used *cantharides* in certain dropsies, as did also Hippocrates, and the former used the same remedy in parenchymatous nephritis, when Charcot ordered the *sulphate of quinine* and the *salicylate of soda* in Meniere's disease, when one can suppress a rebellious roaring in the ears with a centigramme of *sulphate of quinine*, once or twice a day for several weeks; when we see *pilocarpine* triumph over salivation that is rebellious, *antipyrine* in urticaria, *trinitrine* in certain cephalalgias, *calomel* in dysentery; when we still see organotherapy furnish such frequent cures, when the thyroid body given in small doses in certain cases of exophthalmic goitre causes all the symptoms to disappear? And what does this phrase mean that I have just read in a remarkable study of Leopold Levi and Rothschild, upon the hyperthyroidian neurosis: "*Thyroidin*, according to the dose, is capable of producing that which it causes to disappear?"

Without doubt, all these are difficult facts to understand, and Hahnemann was strangely mistaken in pretending that the remedy produced a drug disease that was stronger than the natural disease. On the other hand, Hunter, in saying that two analogous states could not exist at the same time in the organism, and Trousseau, in imagining the substitutive action of a remedy, have given no explanation of the fact. But, as Arago said, where would we be if we denied all that we could not explain? The facts are there, they have their eloquence, greater than all the reasoning in the world.

IV.

We must know how to be eclectic, and if the therapeutics of internal diseases obeys oftener the law of similitude, it must also, in certain cases, observe the law of contraries, thus formulated by Galen: "Cure is but the changing of an abnormal state of the body to a normal state, and, as a result, health cannot be re-established except by that which is contrary to the disease"; such is the therapeutics of the cause and of the symptoms. Thus one employs *morphine* and opiates in pain, in neuralgias, in nephritic or hepatic colics; purgatives in constipation, hypnotics in insomnia, electricity in paralysis, hydropathy and gymnastics in various affections, cold in hyperthermia, the X-rays for tissue nutrition; surgical asepsis, the opening of an abscess, the ligature of an artery, all are inspired by the same maxim. But it frequently, adds P. Jousset, only effects medical palliation, and when one suppresses the pains of a peritonitis and hepatic colic and when one succeeds in lowering the temperature in a febrile disease, does not one employ symptomatic treatment, does not one suppress, at the same time, according to the striking expression of Peter, the vigilant sentinel who heralds the danger? Does not one know the deception of antiseptic medicine in infectious diseases, and the constant non-success of that therapy which seeks ever the cure of the disease in the destruction of the pathogenic microbe? It is the organism that makes and unmakes disease, it is the soil which should first receive our attention. Jousset says: "Palliative medicine annihilates curative medicine, it is only legimate in incurables or in the treatment of diseases of short duration, but which by their intensity are absolutely insupportable or threaten existence."

V.

Such are the considerations of general therapeutics with which I desire to terminate these six lessons on diseases of the heart. I did not wish to make a profession of faith at first, reserving it for the end. I have given you to-day, after a long incubation, my thoughts, and in the midst of therapeutic incoherence, of therapeutic chaos, where we have fought for centuries, after having shown you the therapeutics of yesterday, I wished to designate that of to-morrow, I wished to protest by example against that discouraging word of Marchal: "There is no longer in medicine, principle, faith, nor law." We should not be of those who say, rather lose the patient than a principle! We should be of those who, by example, furnish a complete independence of thought and action without minding the noise about us, and without considering the human passions which too often obscure the vision, and interfere with our mission—that of curing. For during our scholastic disputes the patient suffers, he has the weariness of death and the disagreeable idea of the following autopsy.

All these questions will appear to you, as to me, troubling. If I have succeeded in reconciling for ever Hippocrates and Galen, in terminating that eternal quarrel of the Ghibelines and the Guelphs, to cause to disappear some of the barriers separating the Hippocratists from the Galenists ; If I have succeeded in demonstrating that it is necessary to be both according to the indications, will I suffer from the demi-gods of the medical olympus a major excommunication because I should have recognized a parcel of truth in certain doctrines spotted with error, only by their exaggeration ? What matters it to me ! I shall be, perhaps, conquered for a moment, but without being convinced, and my excuse ought to be the ardour and sincerity of my therapeutic faith.

After a long and severe criticism of more than thirty pages against the Hahnemannian theories in the introduction to his "Treatise on Therapeutics and Materia Medica," Trousseau, thinking with reason that one does not condemn a system by silence, had the courage to recognize that "the doctrine of homœopathy, considered as to the general idea upon which it reposed, certainly did not merit the ridicule that the therapeutic application of the homœopaths gave to it." Because, he adds, from all evidence, local phlegmasias are often cured by the direct application of irritants, which cause an analogous inflammation, a therapeutic inflammation which substitutes itself for the primary irritation.

That which I wished to show you, in my turn, is the exactness of the two precepts upon which the medical doctrine should rest, the cure of numerous diseases by similars, according to Hippocrates, and the action of small doses of medicine, on the condition that these, outside of organotheraphy, should not be imponderable. That which I wish still to demonstrate is that most drugs taken from the vegetable kingdom, particularly digitalis, that has for a marvellous virtue slowness of elimination, ought often to be prescribed in small doses; while drugs taken from the mineral kingdom (bromides, iodides, &c.)are rapidly eliminated, and ought to be given ordinarily in massive and repeated doses for the reasons that I have already explained, especially when the aim is to saturate the organism.

But, with Trousseau, I repudiate energetically the "delirious sidelights and the eccentricities of imagination" of the thaumaturists who tell of a possible cure with insensible doses of the 100th, the 20,000th, and even the 500,000th dilution, with remedies prescribed in doses absolutely imponderable and of an infinitesimality without limits, as a medicinal action extraordinarily multiplied by numerous succussions of a phial; against the absolute assimilation of a drug disease with a natural disease, for example, mercurial ulcerations to syphilitic ulcerations, cutaneous efflorescence produced by *belladonna* to the angina and to the eruption of scarlet fever; against the exaggerated doctrines that take their point of support outside of the organism and that assert always that "the virtue of the drug consists in the totality of the symptoms of the artificial disease that it produces"; finally, against the interpretation given to the minutiae of an extensive and inexact observation of the slightest accident seen following the administration of drugs to the healthy human body. You see that I am quite a Hippocratist, I am far from the practice and the doctrines of Hahnemann, only retaining the two precepts, the truth of which I have demonstrated to you.

I have read somewhere that literature possesses two schools, the myopic and the presbyopic. Is it not the same in science, has not she her myopics with a microscope to the eye, in which all is enlarged, where everything is seen in the small, studying each object, each shape and contour in the midst of a cloud, where nothing is distinguished while the presbyopics who take in the entire surroundings, clear the clouds where the details remain in the shadow, with a general and synthetic vision of things? In literature, as in the sciences, these two schools make war on each other. "Your characters have no muscles," said Theophile Gautier to Merimée, whom he reproached for certain presbyteric literature. "And yours have no draperies," responded Merimée. Well, in medicine we must know how to be at the same time presbyopic and myopic; we should understand and study at the same time the totality and the details in order to see both the draperies and the muscles. That is why it is better to be an eclectic, Galenist and Hippocratist, according to the indications.

In these lectures, which, perhaps, are the last of my teaching, at least, unless a renewal of enthusiasm and force comes to spur me on, I desired to have you know my therapeutic faith, to demonstrate to you the curability of many diseases of the heart, and to protest against the words of Corvisart, and especially of Broussias, pretending that they are "diseases of simple curiosity furnishing nothing to therapeutics", to instruct you upon a new conception of cardiopathies, and having, like the traveller, throwing his eye backward over the way he has travelled, seen the seed sown in the scientific field, I wish to show it to our successors.

This word, "seed," recalls to me a veritable vision that I once had, and which has never escaped my memory. I will relate to you that which I really saw, in order that you may not suppose it to be an artifice of language.

One grey evening in autumn, I saw, after a hard day's labour, an old sower, bent by age and fatigue, coming back to his dwelling, regarding with a dreamy air the lands that his vigorous arm had just shown. Suddenly his face illuminated with a ray of joy and hope, and he said to me : "Upon this ground I will not, perhaps, see the grain grow ; but what matters! My heirs, my children, or my successors will reap an abundant harvest." Then I had before me the image dreamed by the poet, or the statue, perhaps, conceived by the artist, of man, the eternal sower. And to-day, in terminating, I seem to see and contemplate the statue, it becomes animated, it speaks, and says to you: You, the young, full of futurity and hope, dig, dig again, and continue ever to dig the ground, and cause the seed to grow.

Dr HUCHARD.

The following are the comments on this remarkable lecture by Dr. August Schepens, of the *Journal Belge d'Homœopathie* :—

Not a protest was raised during this declaration of principles, and enthusiastic applause interrupted and saluted the eloquent oration.

The recent discoveries upon radium, the X-ray and the colloidal metals, have done much to bring homœopathy to the notice of the learned. In truth, it is not our law of similars that has caused the sneers of the allopaths, but our posology.

I know from experience that it is the infinitesimal dosage that constitutes the great obstacle to the conversion of allopaths.

The day I saw Dr. Bourgois, of Tourcoing, obtain fine results in tuberculosis by doses of a thousandth and even a millionth of a milligramme of *fluoride of sodium*, a bandage fell from my eyes ; it was not possible that the *fluoride of sodium* was alone in the case, it was not probable that this millionth of a milligramme was an extreme dose, beyond which this remedy would be without effect. These observations carried my attention towards homœopathy ; a beautiful cure by my venerable *confrere*, Dr. Vanden Neucker, gave the finishing stroke to my allopathic convictions, already tottering.

Analogous reflections must have been made by a large number of medical men in learning the profound action of radium upon living organisms in doses absolutely imponderable and infinitesimal.

The dissociation of light rays by Finsen with the aim of developing their curative action, by isolating the red rays for the treatment of variola and erysipelas, and the violet and ultra-violet for the treatment of lupus, have contributed not a little credit to the proceedings of our school, which dilutes its medicines to the point of fracturing the molecules and even changing them into ions.

And is it not also an infinitesimal quantity of medical substance that passes through a diseased organ by the process of ionization? That is to say, in moistening the two electrodes of the constant current by a solution of the drug, and applying these electrodes to two opposed points of the suffering part. No balance can indicate the quantity of matter thus withdrawn from the solution; and yet it appears that these infinitesimal quantities act.

All these facts are very suggestive. Apparently they should open the eyes of all, at least of all those who wish to see.

Unfortunately, the kickers are not wanting; in our own days there are the Riolans who prefer to err with Galen than to be a "circulator" with Harvey.

These voluntary blind ones are often the intolerant ones. I know, and many know it as I do, that Professor Denys, of Louvain, is treated as a charlatan by his colleagues because he teaches that the cure of tubercular affections may be made by a filtrated bouillon of Koch's bacillus, in commencing the treatment by infinitesimal doses, the seventh, eighth, and even ninth decimal!

The therapeutics of the past and the future contains great truths upon *similia similibus,* the dynamic action of medicines, their primary and secondary action and the preponderating importance of the soil upon external morbific agents. It is with profound satisfaction that I read the following lines: "Does not one know the deceptions of medical antisepsis in infectious diseases, and the constant lack of success of that therapy that seeks ever the cure of diseases in the destruction of the pathogenic microbe. It is the organism that makes and unmakes disease, it is the soil that fertilizes the grain; it is, then, to the soil that we must first address ourselves."

I will take the liberty to present certain remarks. First, there are some omissions to note.

Thus the law of similitude was certainly formulated before Hahnemann, by Hippocrates, Paracelsus and Stahl [and acknowledged by Hahnemann—note by translator], but Hahnemann alone knew how to accord to it all its value and the importance it merited in making it the basis of a new therapy.

It is true that M. Albert Robin should have the honour of saying that the remeby acts dynamically and not by its mass, but we must not forget that Hahnemann said the same thing a century earlier, and that he, besides, prepared a whole pharmacopœia conforming to this precept.

This is what Dr. P. Jousset writes *àpropos* of the laws of pharmacodynamics cited by Dr. Huchard: "All medicines are subject to these two laws," Dr. Huchard was right in calling attention to it, but we regret that he did not allow Hahnemann the honour, who, already, in 1796, sketched the first lines and continued them in the *Fragmenta* and in the *Organon.* We regret it because these two laws, born of experimentation of drugs on the healthy organism, constitute the greatest star on the shield of Hahnemann.

There are also errors. I propose to point out some of them.

Dr. Huchard is mistaken when he advances that the thirtieth centesimal dilutions are inactive. All homœopaths know by experience that that is false. The proof moreover, has been furnished in the laboratory of the Hospital St. Jacques, by Dr. Jousset, for the *nitrate of silver* and *corrosive sublimate.* These experiments are to the found in the *bulletin of the Biological Society,* 1903, p. 942.

I do not think that Hahnemann ever used such excessive dilution as the 12,000th and 500,000th of which Dr. Huchard speaks. I have, personally, no experience with such dilutions; and frankly, the desire to use them has never come to me. I will, therefore, abstain from giving an opinion thereon, for the good reason that it is difficult to judge of a thing of which one knows nothing.

Dr. Huchard reproaches homœopathy also with being too minute and of attaching too much importance, symptomatically, to slight deviations from the normal state.

Every homœopath who has practised a few years knows that this reproach should not have been made, for the good reason that many times the small symptom is a precious indication for the remedy. The following examples will place this in evidence :—

I receive from time to time the visit of a mother who comes for her daughter's case. The latter is haunted by a mania for suicide by hanging. Never has she attempted any other method of ending her existence. The impulse to this kind of suicide is found in the pathogenesis of *arsenicum,* and a few doses of *arsenicum,* 12th centesimal, delivers the patient for several months from this terrible obsession.

A lady said to me : "If I would end my life." I asked her what means she would employ to do so. "I would throw myself from a window," she replied. In the pathogenesis of *nux vomica* it is related that a person under influence of the drug jumped out of a window ; as my patient presented some other symptoms of *nux,* I administered the remedy, with the most satisfying results.

Another lady attacked by Jacksonian epilepsy had been treated with *bromide of potash* by an allopathic *confere.* The seizures were very little influenced by this medication, and, besides, there appeared many disquieting symptoms ; this lady could not remain at home, she had an irresistible desire to go to the country. In crossing a railroad track she was suddenly seized with a suicidal mania, and she had to struggle terribly against the impulse to throw herself under a train. These symptoms disappeared upon the cessation of the *bromide.* Well, if some day that person were haunted by this same mania for some other cause, I would not think for an instant to giving her *arsenicum, nux,* or *aurum,* or any other remedy reputed to serve in a like case, but I would give her an infinitesimal and inponderable dose of *bromide of potash,* with much hope of succeeding. A thousand times no, the minutiæ of homœopathy are not superfluous ; on the contrary, they are very desirable.

I understand that official medicine does not attach to it any importance. It needed a century, and many discoveries, to acknowledge our fundamental law of similars and our employment of infinitesimal doses. It will probably take some decades for it to be convinced of the advantages of symptomatic study, such as Hahnemann practised and taught.

Our founder was certainly not infallible ; more than one error is found in his writing, but it is none the less true that he should be considered an incomparable genius.

It seems to me that it would have been more just on the part of Dr. Huchard to reclaim a little less of Hippocrates and more of Hahnemann.

Dr. P. Jousset very well says that Hippocrates was a naturalist, that is to say, that he strove to amplify diseased symptoms by giving an emetic in vomiting, a purgative in diarrhœas, a sudorific in perspiration, &c. He hoped that thus the organism would rid itself more completely of injurious substances that made it ill. He did not avoid drug aggravation ; on the contrary, he sought it.

Similia similbus applied in this manner would often lead to disaster.

We had, some fifteen years ago, a memorable and lugubrious example in the first application of Koch's tuberculin, it caused constantly dangerous aggravations. No war that I know of was as frightful for the belligerents as the experimentation of this medical novelty for patients.

Fortunately, the remedy is often borne through the excess of the disease. The rare cures obtained proved the utiliy of the remedy, the unfavourable aggravations were due to a fault in its application, probably to the employment of excessive doses.

Professor Denys, of Louvain, I believe, is the one of all the allopaths who saw clearest into this question. He arrived at the principle of avoiding all drug aggravation.

This method is contrary to Hippocrates and conformable to Hahnemann. Thus, what a difference in the results obtained between the first applications of Koch's tuberculin and those actually realized by the mothod of Deneys ! One might say there is no comparison, it is day and night.

It is the same for us, but in an inverse sense, if in place of following the counsels of Hahnemann in the application of *similia similibus,* we conform to the precepts of Hippocrates.

I recognize gladly the merit Dr. Huchard had in making his public declaration of principles. It partly bridges the abyss which separates the two factions of the medical profession. Dr. Huchard is a savant, combined with a man of heart.—(Translated by W. A. D., *Medical Century,* vol. xvi., No. 4.)—The *British Homœopathic Review,* July 1908.

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……… ………, JERSEY, MARCH 28, 1906.

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OLEUM JECORIS ASELLI.

[In L'Art Medical, for July, a delineated action of Cod liver oil has appeared, from Dr. G Sieffert. There is another from the pen of Dr. H. Clarke in his Materia Medica which has not been incorporated in it. We think it would serve the interest of homoeopathy better to connect them together in one place than to present the account of the oil as given by Dr. G. Sieffert alone. *C.J.M.*]

OLEUM JECORIS MORRHUAE. CODLIVER OIL.

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I. GENERALITIES.

Cod-liver oil, a popular remedy, is a natural product which may be obtained by expression of the liver, from heat and fermentation. It has three principal varieties, the pure oil, the light amber coloured oil, and the brown oil.

The brown oil causes its bad odour and disagreeable taste, and cannot be easily taken for therapeutic use; the pure oil is rich in medicinal elements and it is light amber coloured. For this reason, preference is given to the pure oil in practice. It unites in the best conditions the essential constitutive parts: phosphorus, iodine, bromine, sulphur and the alkaloids.

Cod-liver oil, said M. Collin, has an odour of sardine and insipid taste of the fish. Slowly soluble in alcohol and readily soluble in ether, it has an acidity varying between 0·1 to 1·80 per cent. Its density moves between 0.923 and 0·930; it marks 39° in the oleometer of Lefevre; the oleo-refractometer gives the deviation of 38° to 45°.

The chemical composition is very complex. It contains:

1. Fat (oleine, palmetine and butyrine);
2. Special organic acids (morrhuic and phospho-glyceric);
3. Volatile alkaloids (butylamine, hexylamine, and dihydro-lutidine);
4. Fixed alkaloids (merlusine, morrhuine, homo-morrhuine, and micro-morrhuine). The organic bases are accompained by tyrosamine.
5. Principal minerals (chlorine, bromine, iodine, phosphorus, in the state of phosphoric and phospho-glyceric acids) carbonate of calcium, magnesium and soda.

Cod-liver oil, said M. G. Pouchet, unites in the proportion of 1000 to 5 centigrammes of bases and 1 gramme of morrhuic acid; 25 to 30 centigrammes of phosphorus; 4 to 5 centigrammes of iodine; 0·5 to 1 centigramme of bromine; 1 centigramme of iron. It is given by spoons and sippets from 6 to 7 milli-grammes of alkaloids and 12 to 15 milli-grammes of morrhaic acid. The re-distribution of alkaloids, according to Gautier and Mourgues, is for 100 grammes of bases, amylanine 30c., other ammoniacs compose 18; dihydrolutidine 10; aselline 7; morrhuine 35. The fats contained in the oil of the liver of cod are eminently assimilable, for the slight acidity of the oil, so that its mixture with the hepatic ferments and the materials of the bile favour emulsion.

In commerce, it is seen, falsified cod-liver oil embellishes many shops or in its place other animal oils as the oils of the liver of ray fish and dog fish, the oil of spermaceti whale and vegetable oils mixed with iodine and rendered odorated by the oil of whale are also observed.

II. PATHOGENESIS.

The following is a resume of experiments practised on healthy man by E. Hale, Neidhard, Fairbanks, Wood and Farrington.

General symptoms. Recrudescence of forces and general health. Aspect more florid and healthy than before. Lassitude and general prostration. The patient thinks himself fortunate and suffers great nervous irritation (after the use for many months of the medicament taken a spoonful by the mouth). Hot air is disagreeable. Atrophy. Emaciated person gains weight. Creeping sensation all over body with rush of blood to heart, soreness all round body to back. Fluttering (like a watch) rising from sacrum to occiput, affecting abdomen and chest in such a way that she becomes transfixed, unable to move hand or foot, and it arrests movement if in motion at time of seizure.* Stitches and bearing down in one or other side; worse from bending side inward. Contraction of muscles: musculo-fibrous rheumatism.

Moral. Melancholic temperament. When he spoke of himself, employed third person. Sensation as if he was going to be insane. Feels miserable all over, with great nervous irritation. Sensation as if out of her mind.

Sleep. Insomnia and raving of animated objects during fever and excitement. Less sleep than usual, with nocturnal sweat. Insomnia after 3 A.M., with general perturbation. Dreams of seeing objects i[illegible] room during sleep.

Fever. Chilly each evening, for quarter of an hour with acid vomiting and diarrhœa (cured by Iris. v.). Constantly chilly; feels as if constantly taking cold. Chills from occiput down back and round abdomen. Chill: 3 A.M., in evening, with vomiting and purging for six hours; with spasmodic pain in region of navel (returned every evening for four days, relieved by Iris. v.) Chilly on going to bed; afterwards heat, worse in hot room. Chill and hectic fever, with pulsative pains in spleen. Sensation of coldness on going to bed, followed by fever and heat in chest. Chilliness at 3 A.M., remaining for an hour and followed by fever, pulse 100 to 120. Chilly in evening, afterwards fever and palpitation of heart.

Flushes of heat. Fever and heat in whole body. Pulse frequent, varying between 100 and 120, constant thirst. Sensation of creeping in body with afflux of blood in head. Tertian fever, repeating four times, each time for two hours, afterwards disappeared; chilliness in back and around abodomen (cured by Eupatorium perfoliatum). Flushes of heat in head, with red face, heat in stomach, and fever in extremities of toes, persisting for eight to ten hours. Flushes of heat; face red, stomach hot, heat to tips of toes. Heat in palms; every night. Fever and excitement every night producing wakefulness. Tertian intermittent.

Fever for two hours at night, followed by abdominal transpiration, principally in superior parts of body. Tanspiration every night or constant. Fever followed by violent sweat, specially of head, neck and arms. Sweat every night; with smell of the oil; only on lower limbs. Cold perspiration all day.

Head. Obtuse headache in front and vertex. Giddiness: every thing appearing black. Headache in morning, with constant nausea and vomiting. Headache from left to right temporal regions. Giddiness in head. Dull aching pain in forehead. Steady aching sensations from left to right temple. Aching about inner part of right brow, as if in periosteum.

Bursting headache after coughing as if head would split. Pain from occiput to forehead with nausea.

Eyes. Lachrymation on walking in open air, more pronounced in left. Pressure on eyes; lids swollen and so heavy that it is difficult to open them. Blackness before eyes and blindness, with tendency to close eyes, at the same time sensation of coldness. Obtuse pain in right eye. Eyes swelled. Heaviness over eyes with dry and parched bands. Aching, pain in right eye when using it. Lachrymation when walking in open air, worse left. Lids so heavy, can hardly raise them. During chill, blindness. Every thing turns black.

Ears. Fetid suppuration of ears. Deafness, not able to hear in left ear; abscess in right ear.

Nose. Dry coryza, cough and sneezing. Epistaxis in inclined position, with amenorrhœa. Chronic catarrh and ozena. Fluent coryza, hoarseness and redness of chest.

Face. Red and burning. Growth of skin which transformed into soft hair in chin and upper lip (after using Cod-liver oil for two months). Face red. Growth of short, thick hair on chin and upper lip (in a woman).

Mouth. Yellow coating on tongue. Sensation of dryness in mouth; constant thirst. Pain in tongue, after using Cod-liver oil. Putrid smell from decayed tooth ceased when taking the oil. Tongue: loaded; coated yellow. Parched feeling in mouth. Fetid breath cured.

Throat. Soreness in throat. Tickling at base of throat, with cough after dinner. Soreness in throat after hawking up phlegm. Chronic sore throat, with expectoration of yellow mucus. Tickling in throat; weakness in breath. Thyroid gland swollen.

Taste and Appetite. Loss of appetite. Repugnance to milk. Nausea and thirst and loss of appetite. Vomiting bitter and acid. Voracious appetite diminished in rickety children). Vomiting; of bile and mucus with bitter and acid at expiration of chill. Acid vomiting with chill.

Stomach. Nausea and malaise of stomach. Heat in region of stomach. Weight and oppression in pit of stomach. Pressive and tensive pain. Acid vomiting and relaxation with pain in stomach. Thirst: great, constant; before and during chill. Nausea. Vomiting. Weight in stomach.

Abdomen. Malaise and pressure in region of liver, aggravated by pressure and exercise. Pulsative pain in splenic region with repercussion in side. Shooting and tearing pain in splenic region, aggravated by respiration and touch. Soreness and heaviness in region of liver, increased by exercise; sore like a boil on pressure. Heavy pain in right side with numbness of right arm as if dead. Beating pain in spleen. Aching in splenic region on breathing and coughing, with pain at apex of scapula (at end of chill). Jerking, drawing pains in region of spleen. Flatulence relieved. Atrophia mesenterica.

Stool and Anus. Diarrhœa at night and in early morning. Diarrhœa with chill. Constipation with burning of hands and feet, sometimes with cold feet.

Urinary organs. Reddish urine with red sediment. Pain in region of kidneys. Soreness in kidneys, following soreness in liver. Discharge of mucus from urethra with burning every morning during stool. Acceleration of urinary secretion. Incontinence of urine, cured.

Female Sexual organs. Evacuation of yellow matter from uterus, with weakness in back. Acts as emmenagogue. Menses reestablished (cure). Increase of menstrual flow so strong as to render a suspension of the oil necessary. Soreness of both ovaries; dysmenorrhœa. Leucorrhœa: yellow, with weak back.

Respiratory organs. Shortness of breath with dull cardiac palpitations. Asthma continually increasing in intensity, pain arresting respiration, in right side of chest, upon and along scapula, sometimes traversing scapula through and through. Pain in upper part of scapula. Violent stitches in left side, persisting for someti[illegible] Oppression and heat in chest. Stitches in right side, with prolonged respiration, remaining during whole journey: Pain in chest and stomach with cough. Pressure in chest with violent access of cough in morning. Sensation of excoriation in right chest extending to back. Slight dry cough. Cough during whole night, with palpitation of heart. Tickling cough in middle of superior part of throat with palpitation of heart. Expectoration of yellow mucus. Glairy viscous, yellowish-green expectoration, with salty taste. Glairy, whitish, thick expectoration with violent cough. Whitish expectoration with pain in side, aggravates when patient bends in side. Spitting of blood.

Cough: all night; hard spells in morning; hacking; tickling in middle of upper chest with palpitation; violent with retching night and day; with stitches on raising arm; worse from draughts of air; worse on lying down at night, prevents sleeping; loose all day; from exposure to cold, damp weather, with emaciation and weakness; better when fever comes on. Expectoration: yellowish-green, saltish, tough; tough white; white; bloody mucus.

Weakness in chest and back, worse left. Soreness all over chest, or in centre, with hacking cough and aching between shoulders, worse right side; in chest and stomach with cough; worse by motion. Burning pains in spots, in some one portion of chest. Burning and heat in left chest; through to back, with cough. Pains in upper chest on coughing. Pneumonia of both upper lobes of lungs. Pain through lower chest to back. Pain right side above and below scapula; breathing arrested by soreness; sharp stitches left side. Sensation of excoriation in left chest; worse upper and lower part of left chest, extending to back. Weakness in breast; tickling in throat. Phthisis.

Heart. Rheumatic pain in region of heart and in muscles of chest. Sudden stitches in heart. Cardiac palpitation with oppression and anxiety. Palpitation of heart; with cough; with short breath. Rush of blood to heart, with a creeping sensation all over body. Pulse accelerated, soft and small.

Neck and Back. Pain in back. Pressure and dull pain in sacral region, ameliorated by pressure. Pain in region of kidneys after exercise. Soreness from back to neck. Sharp, heavy aching pain in lower spine. Spinal irritation, sore to touch. Fluttering from sacrum to occiput. Weakness and dull aching in sacral region, better by pressure. Often placed hand in sacrum to support it; often complained of pain in region of sacro-illiac joint; walking increasingly difficult.

Extremities. Continual aching and sore pain in elbow and knee joints. Movements in joints were limited; especially elbows and knees; flexion and extension caused excruciating suffering.

Superior Extremity. Burning heat in palm of hand, especially at night. Hands dry and burning with heaviness of eyes. Continuous dull pain in elbow and knee. Rheumatic pains in shoulders. Hands dry and parched with pain in spleen. Pain in bones of left arm.

Inferior extremity. Cold feet. Feet painful. Abscess in left calf. Rheumatic pain in left foot. Abscess in left foot. Abscess in left thigh. Abscess appeared on left gluteus maximus near anus, and discharged three times; afterwards another boil on right side of chest. Hipjoint disease; especially when originating in bone (rather than in synovial membrane). Sciatica with atrophy of affected limb. White swelling of knee. Rheumatic pain left foot. Fistulae and abscesses round joints. Soreness of both feet. Feet constantly cold.

Skin. Skin red all over, at night in bed, with irritability, morning. Eruption of small red spots, like psora, appeared and from that time she made rapid progress. Eruptions; papular, vesicular; herpetic. (Scrofulous ulcers discharging large quantity of pus. Cold abscesses. Lupus. Icthyosis.) Hairs grow on left side of chest.

Characteristics. In anatomic point of view: diminution of red cells in blood and tendency to cellular hyperplasia.

In functional point of view: sensation of coldness in back and around abdomen. Pains [illegible] before and behind, low and high, right to left and left to right in back. They are aggravated by exercise of each side, principally the left, with predominance in back. Cough aggravates in lying position, by laughing or sudden blast of air. (C. D. Fairbanks).

III. THERAPEUTICS.

In this broad line the allopathic and the homœopathic schools generally accord in the action and indications of the medicament. Professor G. Pouchet said in effect: "The facility with which one realises a stable emulsion of cod-liver oil, in presence of water containing many small quantities of caustic alkalies or carbonates which make eminently proper the constitution of reserves, and in fact a veritable medicament of saving the albuminoids; thus it is the energetic repairer of tissues by phosphorus, iodine, sulphur, bromine and iron in a state of organic combination. It is rich in phosphoric composition allowing to expound the stimulation which exercises on the formation of nucleins, and consequently on the proliferation of the cellules. It intimately increases the phenomena of nutrition and circulation or augmentation of the vital resistance."

Dr. Manquat wrote: "Under its influence one observes a great manifestation of increase of weight in phthisical persons, and rapid absorption of the oil is caused. (J. Rendu. *Lyon Medical*, 10th April, 1878). At the same time the patients are stronger. The number of red globules increases (Thompson). Since the weight of the body increases to an increased weight by the ingestion of the medicament, one must admit with G. Sée, that cod-liver oil favours assimilation and addition of albuminoid aliments; at the same time, it causes saving in the use of albuminoids by economy, for excretion of urea is diminished, which results in oxygenation of fat bodies which are easily carried and easily oxydisable than albuminoids." Therefore, it is advisable to use this medicament at certain period of phthisis, in scrofulosis, rachitis, epidemic hemeralopia, and in all states which speak of physiological misery."

Lauder Brunton estimated that "Cod-liver oil is more a food than a medicament.... It is for this reason the infants called scrofulous, and those presenting a tendency to glandular enlargement, develop better when Cod-liver oil is taken." Elsewhere, he remarked that "if you nourish the body by means of certain fats they long preserve their obesity, while in others, they lose it quickly. The oil of Codliver is rapidly consumed. An adult or an infant becomes well nourished after having absorbed it for sometime, the rapid growth remains even after cessation of administration of the oil. Accordingly to all appearance, this combustibility of the oil makes it in fact a good aliment; it is easily absorbed, assimilated by the cellules and burnt."

To explain the action of the oil, other savants have said that the physiological action is pure, in the allopathic sense of the word. It is in formal opposition to the fundamental law of biology, the predominate intervention of one or the other of the constitutive elements of the substance. We bring it back again to ideal fancy and indirectly to polypharmacy.

It is necessary to say that all the theories only repose on hypotheses? How much more logical is it to write of the pathogenetic action so that we value it more highly? Farrington has spoken a few words in place, in speaking of this substance. He said: "Many physicians support that it acts physiologically. It is an error. *It is a medicament.* It does not act by the oil that it contains as Dr. Hughes pretends. If the oil could act in this way, why other oils do not produce good results? It is the composed drugs, containing iodide, phosphorus and other substances. Dr. Neidhard of our city has experimented it. He gave to the subjects of his experiment, the medicament on the basis of attenuations, up to that from which he obtained a series of symptoms that he considered necessary. I wish to give you a resume of his symptoms. You can employ Cod-liver oil when there are sensation of coldness along the back, hoarseness and pain in the chest. How often you meet with these symptoms at the commencement of tuberculosis! Afterwards coming to acute pricking pains, here and there, they come across the chest;

the patient complains burning pain occurring in the chest, localised or in many places. The fever is especially observed in the evening with burning of the palms of hands. The cough is dry, with expectoration of mucous secretion, as we observe at the first stage of tuberculosis. The symptoms observed in the course of experiment of Dr. Neidhard are intelligible in this respect; the symptoms presented by patients have been cured by this medicament. If you prescribe *Oleum Jecoris Aselli* in attenuation or in substance, you support a scientific basis."

With regard to the oil we have written: " It is a fatty body in which are incorporated mineral substances, and all form a special material of powerful action." In reality, it is a product of natural synthesis, not found in mineral waters or in sea water, each element has not been artificially supplied. And this is so true that professor G. Ponchet explicitly said: " The other multifarious fatty matters are less easily assimilable, and they have vainly attempted to substitute Cod-liver oil. They have proposed to incorporate it sometimes in butter, at other times in liver fats, in medicamented substances, so that, iodine, phosphorus, and bromine are the aims of the transformation to make Cod-liver oil agreeable...... After relative exposition of the chemical composition of the oil, it is easy to comprehend that the mixture is not like other oils, animal or vegetable, (not found in the oils of the liver of other fishes), or the preparation as the syrup of the iodide of starch, which are not capable to replace Cod-liver oil and could not render themselves serviceable to therapeutics."

How then, that after many times of pathogenetical experimented facts by the homœopathic authors and not by the works of the allopathic school, it is observed: the oil of Codliver exercises a favourable influence in the constitution of the blood; pale and anæmic patients become after taking this medicament red and plethoric (Hale); it regenerates the defective red cells of the blood; it is indicated in the general diminution of tonicity, or if there is a tendency to cellular hyperplasia, in the formation of exudates composed of imperfectly developed cellules, capable more often of a potential quality, that is to die (H. C. Wood); it acts energetically in scrofulosis, that is to say, against the tendency to develop the lymphatic glands, against the multiplication of their cellular elements and the formation of caseous depots, slowly degenerating fats with desication, or against fatty degeneration, rapid with abundant production of liquids which transudes as pus and forms abscess (H. C. Wood); it is efficacious in cellular hyperplasia, affecting the mucous air passages; the patient on occasions suffer from catarrh, till finally it comes to the rapid multiplication of cellules, that they produce a number of more or less vesicules in air passages, generally at the summit, which is called consumption (H. C. Wood); it shows its curative power in many diseases which we find in feebleness, emaciation, and anæmia (E. Hale); they intervene usefully in osseous maladies, scrofulous inflammations which are chronic to articulations, caries, necrosis and abscess (H. C. Wood); it combats defective nutrition, especially in infants, when it is pale, devoid of forces and emaciated (E. Hale); it is the medicament of chronic rheumatism, in cachetic subjects with depressed constitution (E. Hale); it is a remedy of nervous affections as neuralgia, sciatica, lumbago, in emaciated and anæmic persons with insufficient animal heat (E. Hale).

IV. CLINICAL.

After that which has preceded, Cod-liver oil has been found indicated in:

Anæmia in insufficiency of red globules. But it is an anæmia which has not resulted either from loss of blood, or from anæmic chlorosis, which is accompanied by anasarca or evolve without emaciation. It is determined by defective nutrition, by causes which prevent aliments from being converted to blood of good quality (maladies of the liver, the digestive apparatus, the stomach, or the intestines and especially of mesentery), or it is beneficial in maladies which tend to deteriorate the quality of the blood such as scrofulosis, tuberculosis, etc. The medicament does not act in leuco-septicaemia. (E. Hale).

General depression. Lethiers and after him Abel Claude have called attention to the medicament in this disease. Claude prescribed a dessert spoonful of the trituration in small quantity of beer, before two great meals.

Lymphatism. Especially at the time of formation of young children with flaccid and moist skin. For them the distasteful preparations, strong with manganese or Cod-liver oil in nature (same dose as for depression). Abel Claude added twenty to thirty drops of Drosera, mother tincture, every day intercurrently.

Scrofulosis. Especially in subjects of lean and thin aspect, with shallow and transparent skin, frequent pulse, great excitability of the nervous system, and heavy specific gravity especially of urine, all signs of acceleration in cellular metamorphosis (Mayhofer). But the same author continues, "in scrofulous subjects, with bloated adipose body with tumefied nose and upper lip, with feebleness of cardiac contraction, defective irritability of the nervous system, inferiority of the specific gravity of urine, Cod-liver oil is far from making any beneficial influence on the patient. They are truly victims who have inconsiderably swallowed the medicament by glasses."

Scrofulous tumefaction of the parotid, thyroid and sub-maxillary glands and also those of the neck, axilla and groin.

Pulmonary phthisis. Especially at the initial stage of pre-tuberculosis. Coldness along the back, horseness, pain in the chest and stomach, strong pricking pain, here and there across the chest; burning pain in places, evening fever with burning of palms of hands; weight on the chest with violent access of cough in the morning, emaciation, loss of appetite, expectoration of yellow mucus or sanguinolent sputum, titilating cough with palpitation, affection of glands in connection with the bone or skin (tinea fovosa, impetigo) [Lilienthal].

On this subject H. C. Wood remarks with great justice: "The value of Cod-liver oil in the state impròperly called pre-tuberculosis is of such importance that one cannot but insist on it. It is without doubt that consumption often commences from catarrh and developes itself rapidly because the disease comes during cold. Each time the patient is feeble, pale, little anæmic, the disease progresses with facility as he takes cold on slight occasions. They are not alarmed as if the disease do not exist, or think it is a local manifestation. In the advanced stage of chronic phthisis the medicament is less efficacious, in the curative point of view, but it acts more usefully than all the remedies of the pharmacopœia in the sense that it allays cough, that it increases strength and weight of the patient, whose general state is ameliorated, it retards or arrests the disorganisation of the lungs, and prolongs existence with the concourse of other curative precautions."

When *emaciation* ensues which is considered as an essential indication, the medicament resembles the emaciation presented by iodine and phosphorus.

Certain forms of *chronic rheumatism* are equally amenable to Cod-liver oil, such as the *musculo-fibrous rheumatism* coming in the course of profound physiological misery as each patient accumulates the defective want of air and light, and is congenitally or hereditarily inclined to the disease by their debilitated and scrofulous constitution. "This form of rheumatism" said Dr. Muller "commences with obtuse pain in the limbs and progressively extends to the vertebral column, at the nape of the neck, and produces a stiffness and rigidity more or less permanent of the muscles of the trunk and limbs. It does not present inflammatory phenomenon but is accompanied by œdematous swelling without redness and sometimes terminates in paralysis."

The *fibrous rheumatism* which comes on by living in damp and cold places, uniquely localises in the articulations. It gradually lessens strength and alters nutrition.

The allopathic authors attribute in this case that ths action of cod-liver oil is purely emperic. It suffices to carry it back to pathogenesis to make the homœpathic action of the medicament complete.

The cure is often marvellous in *rachitism*. Trousseau has indicated it in imperfect ossification, hypertrophy of the cranium with open fontanelles, premature or retarded dentition, hypertrophy of of the liver and abdominal dropsy.

Against *ramollissement* of the bone its efficacy is no less; thus against *caries* and *strumous osteitis*, principally of the epiphyses of large bones, *fistulæ* and *abscesses* around articulations, *cold abscess, ulcerated scrofulous glands* and notably against *tabes messenterica,* all phenomena indicate scrofulosity or rachitism; but as the glands are profoundly and evidently tuberculous the success is doubtful.

The scrofulous and tuberculous affections of the skin such as lupus, icthiosis, are equally in its sphere of action.

At the same time it is applicable to the inflammatory state of the mucous membrane. *Scrofulous ophthalmia, fœtid effuxes* from the ear, maintaining sometimes the deafness of abscess, *dry coryza,* the peculiar *cough, sneezing, hoarseness, chronic nasal catarrh, ozena* and *chronic laryngitis.*

Note the diseases of female organs : *menstruation* arrested by cold, *premature or copious menstruation, dysmenorrhœa,* pain in the two *ovaries* and for the function of the skin *hypertrichosis* and *cold sweat.*

V. MODE OF EMPLOYMENT AND DOSES.

The universal panacea, lately prevalent, is that Cod-liver oil becomes little by little a medicament as given to disuse. It has no particular merit, neither excess of superiority, nor indignity. The great mischief is not to employ it conformably to the law of similitude.

Take an excessive quantity, as is ordinarily done, it becomes repugnant and ends in provoking digestive troubles, and it is good to prefer by medical practitioners emulsions which have some virtue of the original drug.

On the other hand it does not always render service when it is taken. It aggravates certain diseases for which it is taken and where it is particularly and precisely indicated, it is given in massive dose so as to create more or less morbid symptoms of the pathogenesis.

It acts when it is given with measure. At first the homœopaths prescribed it in triturations prepared with sugar of milk, generally in covered form of twenty centigrammes twice daily or as Neidhard has counselled it in drops of tincture prepared, one fluid drachme of the substance in one fluid ounce of concentrated alcohol. Thus judiciously prescribed cod-liver oil in cases where it is indicated, never produces heroic results.

——*L'Art Medical,* July.

REVIEW.

Aids to Pathology. By Harry Campbell M.D. pp. 184. Illustrations 10. Price cloth 3/6 net; paper 3/ net. Baillière Tindall and Cox. 1908.

Aids to Ophthalmology By N. Bishop Harman, M.A., M.B., F.R.C.S. pp. VII 165 illustration 70. Price cloth 2/6 net; paper 2/ net. Baillière Tindall and Cox. 1908.

Two more additions have been made in the aids series by Messrs. Baillière Tindall and Cox. The one is on Patholgy by Dr. Campbell and the other on Ophthalmology by Dr. Harman. Both these books are very useful not only to the students but also to advanced practitioners who from time to time want to refresh their memory. The Pathology contains ten illustrations; of these the illustration on the mosquito cycle is the most interesting and is very impressive. The Ophthalmology contains seventy illustrations, and on account of these the book has become very interesting and attractive. The modest name "Aids to Ophthalmology" really hides its own worth and in 165 pages which include the index and the examination questions, a complete information on ophthalmology is given, and students will hardly require any other text book to read even for his higher examinations in medicine.

Messrs. Baillière Tindall and Cox deserve the sincerest thanks from students anxious to pass their examinations and the running practitioners as well for having given them such useful, interesting and comprehensive aids.

The Pocket Anatomy By C. H. Fagge, M.B., M.S. (Lond.,) F. R. C. S. Sixth Edition. Revised and Enlarged pp. 270. Price 3/6 net. Baillière Tindall and Cox. London, 1908.

The original name of this book was the Pocket Gray but as this edition has been compiled from Quain, Cunningham and Morris, so on the advice of the publishers the present name has been adopted. The book has already passed through six large editions containing in all about thirty thousand copies and this very fact alone will show its usefulness. A student having mastered his Anatomy should always keep a copy of this little book with him to refresh his memory during the time of his examination. The examinations are becoming stiffer every day and there should be certain means to remember all the facts. This naturally leads to the manufacture of such a manual which some fastidious educationists may not like on the lame ground that these will help the students to learn by rote only. We cannot side with such educationists and we are of opinion that means should be invented to help the memory as far as possible without any very great exertion. In Sanskrit literature we find the books on mathematics, astronomy, medicine and other sciences are written in rhyme, for rhyme as every body knows helps the memory to a great extent. So we believe in these days of advanced knowledge abstracts and manuals are necessary however people may think evil of them.

The subject of anatomy is a very vast one and we can not expect diagrams to be inserted in such a small manual. Diagrams themselves are very useful and when they are well made they will remind every thing without so many words. We would like to see very much a companion to this volume containing the anatomical diagrams like those which we have in Gray's Anatomy having references on the face of the diagrams themselves. We hope Messrs. Baillière Tindall & Co., will take up this in hand and with such two volumes the book on anatomy will be complete.

C

METEOROLOGY AND DISEASE.

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

For the Month of July, 1908.

Date.	Barometer. (corrected.)	Wind.		Temperature.		Humidity.	Cloud.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·588	E S E	3·9	90·0	80·8	73	5	0·01
2	29·608	S	5·1	91·5	80·0	82	4	0·23
3	29·592	S	3·4	90·0	80·2	84	6	0·16
4	29·628	S	3·1	93·0	81·2	82	7	0·07
5	29·582	S	3·3	95·0	82·0	94	9	0·13
6	29·561	S	2·3	88·5	79·5	91	10	1·55
7	29·550	W	2·7	83·5	79·5	85	9	0·10
8	29·142	W	4·1	83·5	77·0	96	10	7·20
9	29·586	S S W	3·9	83·5	77·0	91	9	0·70
10	29·578	S S E	5·0	88·0	80·0	85	9	*Nil*
11	29·566	S E	4·8	87·8	78·8	87	9	0·34
12	29·674	E S E	2·9	89·5	79·5	94	10	0·24
13	29·575	S	2·5	92·0	82·0	89	8	*Nil*
14	29·548	S	3·6	93·5	82·0	88	6	0·05
15	29·509	S	4·1	93·0	81·0	87	8	0·40
16	29·503	S	2·2	90·5	80·2	87	8	0·47
17	29·571	W	1·7	90·0	79·0	83	8	1·01
18	29·498	W	2·7	89·0	78·0	93	10	1·85
19	29·622	S	2·8	86·5	78·5	82	8	0·99
20	29·543	S	3·0	92·0	80·0	87	8	0·15
21	29·530	S	1·8	89·0	77·8	98	9	2·07
22	29·518	S	3·1	87·0	78·5	94	8	1·05
23	29·574	S	3·4	88·2	80·0	94	7	0·01
24	29·593	Calm	3·2	90·2	81·0	91	9	*Nil*
25	29·601	S	3·6	92·0	80·0	89	8	0·26
26	29·588	E S E	3·4	90·0	80·5	87	8	0·02
27	29·501	S	2·7	90·0	80·2	85	6	0·07
28	29·533	S E	4·3	90·5	80·0	89	8	0·07
29	29·645	S E	3·8	88·0	79·8	87	6	0·57
30	29·560	S	3·8	90·0	80·0	82	4	0·03
31	29·486	S E	3·4	92·0	81·0	85	7	*Nil*
Mean	29·552	74S15°W	3·4	89·9	79·8	88	8	TOTAL 19·80

In the month of July barometer was shewing decrease of atmospheric pressure for the first time since January. In the month of June, the mean pressure had been 29·543 inches. In July, it was 29·552. South-west wind generally prevailed during the month. The mean velocity of the wind per hour was 3·4; it was less than the previous month. The mean maximum temperature was 89·9 and the mean minimum 79·8, shewing a difference of 10·1 degrees. There was more humidity than the last month. In June it was 81, in July 88, though the rainfall was less than the previous month. The total rainfall in June had been 26·50 inches, in July 19·80. In June 13 days passed without rainfall. In July only four days had no rainfall.

The mortality from cholera lessened during the month than before. In the week ending the 4th July, it was 29. In the week ending the 11th July, 28. In the week ending the 18th July, 19. During the week ending the 25th July, 9. The total was 85 deaths.

The mortality from plague was less than before. In the week ending the 4th July, it was 19. In the week ending the 11th July, 29. In the week ending the 18th July, 21. During the week ending the 25th July, 22. The total was 91 deaths.

Smallpox shewed little cause for anxiety. In the week ending the 4th July, the mortality was 4. In the week ending the 11th July, 7. During the week ending the 18th July, 8. In the week ending the 25 July, 5. The total deaths from the disease were 24.

Mortality from fevers was rather less. In the week ending the 4th July, it was 89. In the week ending the 11th July, 88. During the week ending the 18th July, 70. In the week ending the 25th July, 78. The total was 325 deaths.

Bowel complaints had the following mortality: In the week ending the 4th July, it was 37. In the week ending the 11th July, 28. During the week ending the 18th July, 33. In the week ending the 25th July, 25. The total deaths were 123. It was more than the previous month.

During the above mentioned four weeks the respective mortality from all causes was 398,416,353 and 369, making a total of 1,536. It was hundred deaths less than the previous month. The ratio of death per thousand population was 23·5. It was less than any of the previous months.

Correspondence.

SMALLPOX IN INDIA.

SIR,

In a recently-issued Government Report entitled "Statistics of British India for 1906-07 and preceding years, Part V," there is a table on page 80 giving the ratio of successful vaccinations in each 100 estimated births from 1882-83 down to 1906-07. This table shows a steady increase from 21·76 in 1882-83 to 42·6 in 1906-07. These figures by no means represent the actual state of the native Indian population in regard to vaccination, for every year the number of vaccinations recorded includes as many persons over the age of 12 months as under. For instance in 1905-06 there were 9½ millions of vaccinations, but the number of children under one year of age who were vaccinated was just over 4 millions. Of the remaining 5 millions, nearly 3½ millions were from 1 to 6 years old. So also in 1906-07 there were about 9 millions of vaccinations, but of these only 4 millions were vaccinations of children under 1 year. Thus it will be seen that, although 56· 2 of the births occurring in 1905-06 were not accounted for in the vaccination statistics of that year, a large number must have been included in the 3 millions between the ages of 1 and 6 years vaccinated in the following year. I cannot find out from Government Reports how many children die before they are old enough for vaccination, but the probability that this number is large should be borne in mind when considering these figures. However, leaving out of account the question whether the Government figures express the real truth as to the vaccinal condition of the natives or not, they do show a steady increase in the proportion vaccinated year by year, and in the 25 years given in the above-mentioned table the number has doubled.

Bearing this fact in mind, and comparing these figures with the smallpox death rate per million of the Indian population, why do not we find a steady proportionate decrease in smallpox? Starting with the year 1883, what do we find? In that year and in 1884 there were evidently terrible outbreaks of smallpox for the ratio per million was 1168-1 and 1695-6 respectively. But in the next year (1885) the ratio dropped to 398 per million, and since vaccination was steadily increasing, we should naturally look for the smallpox deaths to gradually decrease, seeing what a large number of natives were becoming protected. But we find no such result. In 1886, it is true the rate went down to 241 per million, but it rose the next year to 304, and again the next year to 452, mounting in 1889 to 645. Then there was a drop to 549, and during the next 4 years the ratio declined to 196 per million in 1894 (the lowest for the whole period under review). But in 1895 it rose to 206, in 1896 to 642, and in 1897 to 753 (the worst year since 1884). The next two years were not nearly so bad, being 262 and 233 respectively, but in 1900 the ratio rose again to 406, fell slightly to 398 in 1901, rose badly to 511 in 1902, fell again to 413 in 1903, and still more in 1904 to 244, rose again to 314 in 1905 and still more to 484 per million in 1906. It will thus be seen that the ratio of smallpox deaths per million was higher in 1906 than in 1885, in spite of vaccinations having doubled. How can any one believe that vaccination protects from smallpox, or mitigates the severity of the disease in the face of such figures.

I have been told by a lady missionary just returned from India that in the Central Provinces the mothers are compelled to have their children vaccinated on both arms. They have asked her in many villages to bring this matter to the notice of some one in authority as they resent it very much. In any case vaccination is useless and it is a cruel operation as well; but to vaccinate on both arms in a country where a dirty floor is the most common place for the children to lie is doubly cruel. It seems strange the Indian Press refuse with one accord to discuss this matter. The figures are plain enough for any one who cares to investigate them. The absolute failure of vaccination to stop smallpox or to mitigate it is demonstrated again and again and yet nothing is done. Disease and death are spread by this means, and all for no good. Will no one take up the matter? We in England are on the road to the complete abolition of compulsory vaccination, and even now all children born recently can easily be exempted from the operation. Men and women in England have taken a strong stand and have spared nothing in their efforts to rid the conntry of this terrible curse. Is there no one in India who will do the same. A perusal of the various Government Reports dealing with vaccination, plague inoculation, etc., makes one wonder whether the recent unrest in India may not have as one of its contributory causes the enforcing of these various vaccines and serums on the people.

Continually we are met with phrases showing the hatred of the people for vaccination and plague inoculation.

I earnestly trust you will print my letter in the hope that some one with time and money will take up this matter in the interest of the natives and also of the European employées who are being forced, in some towns, according to recent reports, to have their children vaccinated.

50, Parliament Street, S. W.
August 28, 1908.

Yours very truly,
CHARLES GANE.

[We have written many times with regard to the unsuccessful effort to prevent smallpox by vaccination. The whole of the orthodox school (allopathy) supports the Government in this chimerical practice and our single handed effort has produced no good result. The Bengal Vaccination Act was introduced in 1880 and after twenty-seven years of working the same futility prevails. Further, it is compulsory against the wish of many sober thinkers. Government as a pretended guardian of health, unknowingly seeks to undermine it.—C. J. M.]

EDITOR'S NOTES.

Diphtheria.

The following is from the *Medical Times*, August:

"Epidemics of Diphtheria among wood-pigeons are discussed by Dr. W. L. Sambon, of the London School of Tropical Medicine in the Lancet. The disease is not confined to the wild birds; the bacillus is equally distinctive to domesticated pigeons, which in turn infect game birds and domesticated fowls. The latter carry the disease into the cattle yards and stables of farms, victimizing the horses on the one hand and the cows on the other. Then the teamster and the milkman among the farm hands become infected, and distribute the germs with the milk sent to town. Diphtheria may, on occasion, be directly communicable from birds to man; and this through the medium of eggs. Characteristic diphtheritic membranes are to be found in the oviduct of fowls; and Sambon has found fragments of such infectious matter in the egg itself on his own breakfast table. Cooking, no doubt, destroys the germ; but those who partake of raw eggs and milk should see that the "white" of the egg is above suspicion. Diphtheria seems to be most prevalent along the east coast of England—the landing places of vast hordes of wood-pigeons in their annual migrations."

Epidemics of several diseases including diphtheria are communicable from bird to man. Long before, it was discussed whether cancer is communicated to man by pigeons. At the same time, it should be remembered that some diseases which are fatal to man, happen in ordinary course to birds without proving dangerous. We had occasion to see a case of malignant adenitis, which was mistakenly diagnosed as cancer by many medical men, supposed to have occurred from wild pigeons, which were living in the house in large numbers. But an isolated case can not formulate a rule. Observations are necessary to come to a clear conception of the communicability.

Lord Northbrook and Hot Climate.

The *Medical Times*, August, says:

"Delane, the former editor of the London Times, whose excellent biography by Dasent has been published by the Scribners, seems to have had an exquisite scent for news. He one day met Sir Richard Quain at the Athenæum. In the course of a few minutes' conversation the latter observed: "Lord Northbrook called on me to-day and asked me how a hot climate would be likely to suit his daughter, whom I have had under my charge. I said it would suit her very well indeed." Delane said nothing at the time, but the next day the first article in the Times astonished everybody, including the official world, by announcing that Lord Northbook was going to India as Governor-General. A few hours afterward an acquaintance offered his congratulations to Lord Northbrook, who said they were premature, inasmuch as the appointment had only been settled that morning, and how the Times got hold of it the new Viceroy could not imagine. The truth, of course, is that Delane had, with the magnificent prescience to be found only in the journalistic make-up, put two together."

In every branch of knowledge, there are audacious conjectures which sometimes prove true. It occurred more in science than in other regular studies. But politics now takes the lead. It is the business of every body to deal with it. A keen observer of it gains a reputation and advantage by its forecast, if it happens to be true, which is unequalled in other speculations. In monetary speculation there is loss, but in others if there be no success no loss is incurred. Delane was an audacious speculator in politics, and his forecasts many times proved true.

Insect Stings: Remedies.

The following is from the *North American Journal of Homœopathy* for September. We make no remarks on it:

"In minor stings, such as the mosquito, there are two drugs almost specific—aconite and ledum palustre.

Aconite has a pathogenesis with a miliary eruption and characteristic pricking sensations, whence its usefulness in such cases. The celebrated Dr. Heermann, who so brilliantly practiced homœopathy in Paris as successor of Chargé, considered its action very certain. While in America making some improvements in his estate he had occasion to ask his laborers to destroy a hornets' nest, and on their naturally hesitating, he spurred them on by promising immediate relief if stung by the insects. The stinging promptly followed, and, to the great astonishment of the men, a few globules of aconite 30 immediately relieved the pain.

Ledum, so useful in wounds from pointed instruments, corresponds well to uncomplicated insect-stings. When the sting develops grave complications we have recourse to the following:

Apis is isopathically indicated in the stings of bees and wasps; when there is considerable swelling, possibly dangerous because of its seat on the mucosæ, with extreme sensitivity to contact and pains like hot needles. The urinary tract may become involved.

Anthracinum, where the lesion is anthracoid in type, with burning pains. Swelling and induration of tissue, septicemia bluish or black phlyctenulæ.

Arsenic, with intense burning pain. Threatening gangrene. General condition grave. Adynamia, anxiety, and unquenchable thirst. Fear of death.

Lachesis, where the local lesion is very serious. There is bluish discoloration, gangrene, infiltration of tissue. Extreme sensitivity to touch and intolerance of all contact. Nervous adynamia. Threatening cardiac paralysis.

Tarentula, isopathic to spider-bites, and similar to lachesis in the bluish color of the lesion. There are violent burning pains similar to arsenic and anthracinum, and with the latter it has a common indication in the furunculous lesion. The general condition is one of extreme agitation, and constant moving about."

The seven periods of the History of Medicine.

I

B.C. 570 to A.D. 120. Pythagoras, Hippocrates, Asclepiades, Dioscorides, Themison, Aretæus.

II.

A.D. 120–1500. Galen, Celsus, Arabian Physicians, Early Mediæval Schools (Salerno, Padua, Salamanca, Montpellier).

Church Decree forbidding Medical Practice to Priests, 1162—Roger Bacon.

III.

A.D. 1500-1640. Paracelsus, Vesalius, Eustachio, Lord Bacon, Van Helmont.

IV.

A.D. 1640-1738. Harvey, Sylvius de la Boe, Boyle, Sydenham, G. E. Stahl, F. Hoffmann, Radcliffe.

V.

A.D. 1738-1800. Von Haller, Baron Stoerck, Dehaen, Mead, Cullen, Brown, Jenner.

VI.

A.D. 1800-1847. Hahnemann, Rasori, Broussaïs, Bretonneau, Trousseau, Rademacher, Ling, Priessnitz.

VII.

A.D. 1847-1908. J. Y. Simpson, Lister, Hughes-Bennett, Pasteur, Finsen, Koch, Almroth, E. Wright, etc.,—The *Homœopathic World* August 1908.

The above is from Dr. J. Murray Moore's lecture on "Foreshadowings of Homœopathy from Hippocrates to Hahnemann" He has given the list of medical heroes who flourished in Europe only, but he has not included the names of Varadwaja and other sages of India. It was Varadwaja who inculcated the three principles of medicine of which one is the homœopathic doctrine. And thus it was he who first promulgated it into the world. We therefore alter the classification of the list of heroes thus :

I.

B.C. 3000 to B.C. 1000 Varadwaja, Susruta, Bagbhatta.

II.

B.C. 570 to A.D. 120. Pythagoras, Hippocrates Asclepiades, Dioscorides, Themison, Aretæus.

III.

A.D. 120-1500. Galen, Celsus, Avicenna and other Arabic physicians. Roger Bacon, Chakradatta.

IV.

A.D. 1500-1640. Paracelsus, Vesalius, Eustachio, Lord Bacon, Van Helmont.

V.

A.D. 1640-1738. Harvey, Sylvius de la Boe, Boyle, Sydenham, G.E. Stahl, F. Hoffmann, Radcliffe, Yusuf Bagdadi, Daud, Aulaki, Ismail, Abu Ryhan, Beruni.

VI.

A.D. 1738-1800. Von Haller, Baron Stœrck, Dehaen, Mead, Cullen, Brown, Jenner, Ulyni Khan, Mahomed Kasem, Mahomed Afzal, Gholam Hossein. [C. J. M.]

VII.

A.D. 1800-1847. Hahnemann, Rasori, Broussais, Bretonneau, Trousseau, Rademacher, Ling, Priessnitz.

VIII.

A.D. 1847-1906. J. Y. Simpson, Lister, Hughes-Bennett, Pasteur, Finsen, Koch, Almroth, E. Wright, Gangadhar Kabiratna.

Pancreatic Juice and Glycosuria.

The *British Medical Journal* of August 20, has the following:

"Dale, and recently Swale Vincent and Thompson, have shown that the islets of Langerhans are phases in the life-history of the pancreatic acini: in fact, that they are derived by the exhaustion of the gland by secretion or inanition, and that probably from them acini are again reconstructed.

According to others, notably Rennie, the islet is a definite gland arising, it may be, in conjunction with the pancreas in the embryo, but in the adult permanently differentiated and responsible for the internal secretion. It was suggested by Laguesse that this alternation between acinar and islet tissue represented an alternation between the external and internal secretion, that the same cell at one time secreted into the gut, and at another into the blood. This view, however, according to Rennie, has now been abandoned.

It is the object of this paper to revive this view, though in a somewhat modified form. We have examined the pancreas in the dog, cat, guinea-pig, bird, frog, and the cartilaginous fishes, and through the courtesy of Dr. Rennie have been able to critically examine his specimens of the teleost fish. Although in each case the organ, especially with regard to islet tissue, presents many differences in detail, there is no doubt in our minds that the islet is a phase in the life-history of the acinus.

The isolated islet of Rennie, consists of both tissues, and it is not difficult to imagine the origin of one from the other.

In his paper he states that observers have not yet found islet tissue in elasmobranchs. We have examined the gland in four species, and in each case have found islets. Moreover, in no other type we have studied is the transition from acinus to islets so well marked. We have not time to enter now into a detailed description that we hope to publish shortly.

At present we are rather concerned with the functional significance of such a change. It is best shown in the case of *Mustelus vulgaris.* The acini, as usual, consist of cells divided into two zones, an outer basophil containing the nucleus, and an inner coarsely-granular eosinophil. This division into two zones is found in other secreting cells, but in no case is it so well marked as in the pancreas. The outer zone is regarded as constituting the actual cell machine and the inner the cell product. As in other glands, secretion is accompanied by a discharge of the granules forming the inner zone. In the case of the pancreas, the basophil zone may also become discharged and lose its affinity for stain, and thus become an islet. This change is specific to the pancreas, and, taken in conjunction with the known internal secretion, surely forms its histological basis.

The discharge of each zone, although not necessarily produced at the same time, does occur as the result of the same stimulus—namely, the injection of secretin—that is to say, a stimulus arising normally from the intake of food. The internal secretion therefore takes place as a result of the external secretion.

The pancreatic juice, according to Bunge, is the digestive fluid *par excellance.* He points out that whereas in many animals a gastric digestion is wanting, in all there is found something corresponding to pancreatic juice. Again, dextrose, as far as experiments at present go, is the best tissue food; and although we do not exactly know how, the internal secretion of the pancreas determines its utilization by the organism.

We have, therefore, in the pancreas a most important link whereby continuity between food and tissue metabolism is maintained. Starling has pointed out the importance of hormones, that they probably arise primarily as metabolites, are soluble in water, and resist boiling. This view is in accordance with such a conception. The discharge of the basophil substance is essentially a katabolism, on the one hand setting free energy to make pancreatic juice, on the other giving rise to metabolites, which pass into the blood and determine the assimilation of the digested food.

Lastly, one would point out the explanation which such view offers of the difficulty of extracting the active principle of the internal secretion from the gland and the uselessness of giving pancreatic extracts in the treatment of diabetes. It is well known that thyroid deficiency can be cured by thyroid extracts.

The secretion of the thyroid is colloidal, and being retained by the organ previous to its passage into the blood can be easily extracted. The active principle of the pancreas is a diffusible metabolite, passing at once into the blood and never retained by the organ.

It has occurred to us that treatment of the after-living organ with secretin previous to making an extract might serve to capture this important hormone. We have unfortunately not yet been able to prove anything along these lines, but are now endeavouring to do so.

Secretin alone has been shown to be doubtfully beneficial in the treatment of diabetes, and pro-secretin has been found to be absent from the duodenum in some cases.

We must apologize for occupying time with a somewhat theoretical contribution, but hope that the conception may serve to throw some light on the connexion of the pancreas with diabetes and its ultimate successful treatment along scientific lines."

The hypothetical phase of the connection between diabetes and the pancreas is worthy of attention. Unless more facts come to the front, it is difficult to accept the theory.

An unusual Case of Chronic Bi-Nitrobenzene Poiso

The *Lacet*, September 5, writes:

"A youth, aged 16 years, was admitted into the Hudders-field Infirmary on the evening of May 25th, 1907. In appearance he was pale and bluish, though the blueness did not amount to cyanosis. He was very weak and prostrate. His skin was a dirty yellow and his conjunctivæ were also yellow. He was restless and short of breath, rambling, excited and sleepless. The temperature was normal; the pulse was 80, feeble, and of low tension.

The tongue was dry and coated, the palate was yellowish, and the gums were blue. There was marked tenderness over the liver, stomach, and spleen. There was bilious vomiting and the bowels were constipated. The urine was dark brown in colour but clear and of specific gravity 1022. No bile was present. He was not in a condition to give an account of himself or to detail any history of his illness; but the condition of the urine, the colour of the lips and palate, the peculiar yellowness of the skin and conjunctivæ, the yellow pigmentation on the hands (so constantly found in workers amongst bi-nitro compounds), together with the tenderness over the liver, spleen, and stomach led us to make the diagnosis of chronic bi-nitrobenzene poisoning. We subsequently learnt that he had been working at some neighbouring chemical works amongst bi-nitro compounds from the previous January to April and that during that time he had on two occasions—once in February and once in March—suffered from slight attacks of acute bi-nitrobenzene poisoning; also that on each occasion he had been off work for two days. On April 29th he had another attack of a somewhat more severe character. He felt ill and weak, was dizzy, and had a staggering gait. He was breathless and his face was pale, and his lips and fingers were blue. He at this time left his employment because of his condition, but in a week's time was well enough to take some light open-air work. He, however, never felt well. He was done up every night. He frequently had cramps in the legs and once or twice vomited dark green stuff. On May 19th he went home feeling very ill. He vomited and was very sick. He was dizzy, "light-headed and raving." He had pains in the head and limbs, and his urine was "like porter." His skin and eyes were much yellower than usual, This condition continued until he was sent into the infirmary on May 25th. After admission he showed no sign of improvement but each day the jaundice got deeper; the rambling and excitement were more marked. He became comatose and died on May 29th. The blood was examined by Dr. R. H. Walton, the senior house surgeon, who found the number of red cells and the amount of hæmoglobin normal.

Necropsy.—The post-mortem examination revealed several unusual features. The yellowness of the hands produced by contact with the bi-nitro compounds had not worn off, although the lad had been away from the work over four weeks. His gums were greenish-yellow and his palate had a yellow discolouration. On the lower costal cartilages on both sides were minute ecchymoses. The heart weighed 10 ounces and pale and flabby. The colour of the blood was darker than usual. The liver weighed one and three-quarter pounds. It was rather soft in consistence and there was grey mottling on the upper surface of the right lobe. It was generally paler, especially the right lobe. On the under surface were several small paler areas, apparently fatty. On section, the whole of the interior had a peculiar yellowish-green mottling and appeared to be fatty. The liver substance was very friable, easily breaking down. The gall-bladder contained about six ounces of dark thick bile. The spleen weighed five and three-quarter ounces; it was more mottled in appearance than usual. The kidneys each weighed seven ounces; they were mottled, pale, and fatty. The mesenteric glands were enlarged and dark. On the mucous membranes of the intestines and the bladder were numerous minute ecchymoses. None of the organs were bile-stained. Samples of the urine were sent to the Clinical Research Association who reported that they could find no trace of nitrobenzene nor could they find leucin or tyrosin or bile. The brown discolouration they attributed to the presence of a marked excess of indican. At the inquest evidence was given to show that the lad had worked amongst various bi-and tri-nitro compounds (bi-nitrobenzene, bi-nitrotoluol, and tri-nitroluol). Specimens of the liver and kidney and samples of the blood and urine were forwarded to Dr. W. Malden, Pathological Laboratory, Cambridge, who kindly sent the following report:—

Report on Specimens from the Patient.

Liver.- Deep yellow mottling round the bile-ducts; some large patches resembling acute yellow atrophy. Specimens too much macerated to cut sections from. Liver contains no exceess of iron.

Blood.—Dark purple-brown colour. Spectroscopically gives band of met-hæmoglobin. Microscopically, differential leucocyte count per cent.: eosinophils, 1; polymorphonuclears, 50; large mononuclears, 5·5; lymphocytes, 43; mast, 0; nucleated red cells, 4 seen; myelocyte, 1. Great variations in size of red corpuscles. Some poikilocytes. A fair number of basophil reds and some polychromatophils.

Urine.—Rich brown, clear. Reaction faintly acid. Specific gravity, 1020 at 60° F.; albumin, distinct trace; sugar, none; bile, slight trace; free urobilin, considerable quantity chemically and spectroscopically; free di-nitrobenzol, none. Miscroscopically, much epithelial debris, flat, squamous, cylindrical, and goblet cells. Casts, a few epithelial casts. Blood and pus cells, a few.

Opinion.—In my opinion this case is undoubtedly one of chronic poisoning by some body of the nitrobenzene series. The clinical history is clearly in favour of this diagnosis. History of three months' work in chemical manufacture of di-nitrobenzol and other allied compounds. Twice off work during that time from symptoms of poisoning. State on admission to hospital: cyanosis, vomiting, jaundice, dark urine, dyspnœa.

Post-mortem appearances.—Liver resembling acute yellow atrophy, heart pale and fatty. Intestines ecchymosed. Kidneys enlarged and fatty degeneration. The specimens I have examined confirm the diagnosis. The blood and urine are most characteristic. The only points which are not in favour of bi-nitrobenzol poisoning are these: 1. There was no anæmia (red corpuscles counted normal). 2. There was no increase of iron in the liver. These, however, cannot outweigh the balance of probability in favour of bi-nitrobenzol poisoning as shown by all the other appearances."

WALTER MALDEN, M.D.

The following is the remark of the *Lancet*:

"*Remarks*—So far as I know, no case exactly resembling this has been described before, but there can, I think, be no doubt about the diagnosis. The only other thing that it could be is ordinary acute yellow atrophy. Probably the hepatic degeneration closely resembled that which takes place in this disease but that it was acute yellow atrophy and nothing more is rendered unlikely by the following facts. In acute yellow atrophy the gall-bladder is empty. In this case it contained six ounces of bile. In acute yellow atrophy many of the organs are bile-stained. There was no bilestaining at all. In acute yellow atrophy there is almost invariably leucin or tyrosin or both in the urine. In this case these were both absent. Besides, as Dr. Malden points out, the clinical history of work amongst bi-nitro-compounds, the fact that he had suffered on three previous occasions from acute bi-nitrobenzol poisoning all point to the probability of the case being one of chronic bi-nitrobenzene poisoning."

[Accepting the review of the *Lancet* that this case does not exactly correspond to acute yellow atrophy of the liver, so far it can be said that the signs and symptoms come close to acute yellow atrophy. At any rate bi-nitrobenzene in dilution is worth a trial in acute yellow atrophy. C. J. M.]

The Bite of a Savage Dog and its Owner's Liability.

The *Lancet*, August 1, has the following:

"Medical men who from time to time are witnesses of the cruel injuries inflicted by the bites of dogs upon innocent strangers will be interested in observing that the Court of Appeal has laid down definitely the law with regard to dogs kept by persons aware that they have savage dispositions. The case in which the appeal was made was that of a barmaid bitten by a dog owned by the keeper of the public-house where she was employed, and questions were raised as to the liability of the dog's owner in view of the fact that the potman, either by his negligence or by his wilful misconduct, had contributed to what had taken place. Apparently he had had orders to chain up the dog, which had been disobeyed, and his conduct might have been regarded as such that his master could not be held liable for it. The country court judge, as a matter of fact, had taken this view and had non-suited the plaintiff, and the Divisional Court had upheld his judgment. The Court of Appeal laid down the law with regard to a dog known by its master to be savage to the effect that such a brute comes into the same category as the wild beast, the animal naturally dangerous, and is kept at its owner's risk—that is to say, it is not necessary in the case of a dog known by its master to be savage for a person bitten to show that the dog was kept negligently. Nor can the master defend himself by proving that he took every possible precaution to prevent the dog from biting any one. There is nothing illegal in keeping such an animal, but he who keeps it is liable for any injury that it inflicts. Inconsiderate dog-owners should take warning by this decision."

In this country several cases have happened in which owners of ferocious dogs were fined and warned. Perhaps, in no case the owner escaped except by ample apology and promise of precaution to the satisfaction of the complainant. No case has been dismissed in which it could not be proved that the complainant irritated the dog and the injury resulted from the irritation Simple order of chaining the dog, without the execution of that order, does not relieve the owner of the animal from liability.

CLINICAL RECORD.

Foreign.

CASES FROM PRACTICE.

By Dr. Simpson.

I. Elsie W., æt. 15. Pallid, of spare habit, inclined to stoop. Studious, mild disposition. Headache constant. Digestion slow, tongue coated, breath fœtid. Epigastric pain, but empty feeling in forenoon, hands damp and cold; backache pains. *Calc. phosph.* 30 (omni mane), 10 doses, was prescribed on November 15, 1907, for this group of symptoms, and on March 20, 1908, she was seen again, suffering from easy fatigue, gastro-enteric crisis, light sleep (with frequent waking), and *dark-red, copious* catamenia, appearing every fortnight; for these symptoms she got *Sulphur* 30 each morning one week. Each monthly period became more natural in quantity and her health is *now excellent.*

II. Mrs. W., mother of former patient, æt. 45. Rheumatoid arthritis of long standing. The hands and knees are stiff and painful; worse in bed. The left mamma is swollen, and is the seat of pains which radiate to left side and back. Stools costive, slow, difficult. Urine deposits a red, sandy sediment. Abdomen distended. *Lycopod.* (6) gave speedy relief after six doses (one every evening).

III. Miss Lilly W., æt. 38. Strumous, pallid. Had necrosed tibia at the age of 12, which was placed in Thomas's splint for eighteen months, during which time several long spicules of dead bone were extracted from choanœ, from which fetid pus oozed daily. Pure air, milk diet, perfect rest, and *Silica* 30 were prescribed with perfect success, and general health maintained for twenty-five years, when she complained of a painful swelling on inner side of knee, aching after little exertion, with tenderness on pressure, and the bursa patella was swollen; also *Sticta pulmonaria* (6) and red-bone marrow, soon caused subsidence of swelling. *Silicea* 6 and *Sulphur* 12 completed the cure.

Mrs. McK., aged 56, of spare and feeble habit, disposed to diarrhea, and menorrhagia, and leucorrhea, suffering now great prostration of the vital power from great loss of fluids, apepsia, distress in epigastrium (for forty minutes after each meal), and tenderness in that region, must keep recumbent; often, during day, nausea from odour of cooking food, or tobacco smoke, diarrhœa, or else ineffectual urging to stool; pain relieved by hot poultices. Urine dark-red in colour, sleep with frequent waking, tormented with flatulence in bed. Prescribed *Sulphur* dil. 30 each morning, eight doses. After sixteen days improved, frequent desire to stool continues. Prescribed *Nux v.* 30, one dose each night (twelve nights). Report much better, omit all medicines; six months after report is "improvement maintained."

Taka diastase greatly aided digestion of hydro-carbons.—The *Homœopathic World*, August 1, 1908.

Gleanings from Contemporary Literature.

ARTERIAL BLOOD-PRESSURE.

By Byres Moir, M.D. Edin.,
Physician to the London Homœopathic Hospital.

According to Halliburton, the Rev. Stephen Hales, vicar of Teddington, was the first to demonstrate blood-pressure in the year 1727. He inserted, using a goose-quill as a cannula, a glass tube at right angles to the femoral artery of a horse, and noted the height to which the blood rose in it. The blood rose to the height of about 8 ft., and having reached its highest point, it oscillated with the heart beats and also with the respirations.

The method had its disadvantages, and you see before you on the table to-night some of the instruments that have been invented since then for the purpose of measuring blood-pressure, and I am afraid we have not yet found the perfect instrument. This can be easily understood if I refer, without bothering you to-night with the physiology of the subject, to the factors on which the blood-pressure depends.

We have: (1) the energy of the heart; (2) the peripheral resistance; (3) the elasticity of the arterial walls; (4) the volume and quality of the circulating blood.

It is easy to see that for each individual there must be a normal condition of the circulation, depending upon these four factors, and when there is a departure from this normal state we wish to find out which factor or factors are at fault. Increased pressure may arise from any of the factors, and it is interesting to see how different observers dwell upon different points. Clifford Allbutt has brought a new subject into the question, viz., the viscosity of the blood, which deserves especial consideration from the point of view of peripheral resistance. When we consider the capillary circulation, we can see the importance of this.

The workers in the field of blood-pressure have been many; of books the best are Janeway's "Clinical Study of Blood-pressure," Russell's "Arterial Hypertonus, Sclerosis and Blood-pressure," and Oliver's "Studies on Blood-pressure."

The sphygmograh was the first attempt to measure the blood-pressure, and the best form of it we owe to our late colleague, Dudgeon. Janeway, in his work, referring to the sphygmograph, says: "These instruments are of purely historic interest, for the sphygmograph is an instrument whose results are notoriously subjective and dependent upon the observer who applies it." To this I will refer later.

Among the instruments upon the table we have Mummery's and Martin's modifications of the Riva Rocci, Erlanger's, Oliver's, Janeway's, Hill and Barnard's and others.

These will be demonstrated at the end of the meeting, and now I will refer to the two with which I have been working—Martin's modification of the Riva Rocci and Erlanger.

The principle is the same in both—a rubber bag encircling the arm and inflated by means of a bulb with air, by which the brachial artery is compressed. In the Martin the pressure is taken above that necessary to stop the radial, and the point at which the mercury stands when the first pulse comes through is read off as the systolic pressure. In the Erlanger, instead of the pulse being felt, a revolving drum is used by which a graphic tracing is obtained. I have found the same result whether applied to skin or outside the coat.

But the influence of the vessel wall cannot be left out. Von Basch, of the Vienna school, one of the first to make practical use of a sphygmomanometer, considered that the pressure required to close the normal radial amounts to 1 mm., and even for sclerotic vessels, as not above 5 mm.; and Janeway says: "That a sclerotic vessel may offer considerable resistance to compression is a common belief, which I do not think is justified, and that errors from this source with the wide armlet, and using the first fully formed pulse as a guide, have little significance." They seem to have come to this conclusion from the observation of dead arteries, and I fully agree with Russell that the thickness of the arterial wall is a most important factor, and that its compressibility varies according to the amount of arteriosclerosis present, and this must be overcome before we can determine the blood-pressure inside the vessel.

In blood-pressure we have not such a definite standard as in temperature—it is continually altering; first of all we see it raised during the systole of the heart, falling during the diastole—hence come the terms systolic and diastolic pressure, meaning the highest and lowest pressure of the pulse wave. Then we have the respiratory variations; it is altered by posture, muscular work, atmospheric pressure, temperature, cold winds; and mental emotions have also a marked effect.

NORMAL RANGE OF BLOOD-PRESSURE.

In young adults the lowest limit of systolic pressure that can be considered normal is 90 mm., while the upper limit can be put at 160. In the great majority of young males the pressure is found to be from 100 to 130. In females generally the pressure is found to be about 10 mm. lower than in males. Professor Leonard Hill gives 120 to 125 mm.; Prof. William Russell gives 105 to 115 (not above 120); Dr. Oliver puts it at 115 to 125.

Colonel Deane has drawn up a table for me the first part being taken from Janeway's book and the latter half from his own observations at Aldershot.

We have not as yet a uniform method of measuring the pressure, so that no complete comparison of these results can be made. Thus Janeway says; "The usual readings from Hill and Barnard's sphygmomanometer are neither diastolic nor systolic pressure, and cannot be compared with anything so far as absolute values are concerned." Then, again, in the measurement of systolic pressures, the narrow armlet affords higher readings, amounting to as much as from 10 mm. to 25 mm.

Colonel Deane has taken his with a 12 cm. armlet, in a sitting posture, the band at the level of the heart. The pressure is raised above the point where the brachial pulsation is stopped, and the first full beat coming through is taken as the point of measurement of the systolic pressure. The men were going through the regular work of the gymnasium at the time, and the average of 308 was 124·7. One man gave 190. The question of error in observation of pathological conditions comes in.

	No. of Observation.	Age.	Range of Normal Blood-pressure (Systolic).	Method Employed.
Oliver ..	Not given	Adult ...	90 to 145 mm.	Not stated
Janeway ...	Not given	Adult ...	90 to 130 mm. ...	12 cm. armlet
Thayer ...	89	20 to 30	Average 136·9 mm.	5 cm. armlet
Jellinek ...	532 soldiders	Not given	80 to 185 mm. ... Majority 100 to 163 mm.	1·5 cm. ring Gartner's tonometer
Henson ...	25 labourers ...	17 to 30	105 to 158 mm. ... (Average 137 mm.)	5 cm. armlet
Lieut.-Colonel H. E. Deane	164 soldiers ...	20 to 30	94 to 190 man. ... (Average 128·3 mm.)	12 cm. armlet All the men were under gymnastic training at time of observation
	111 soldiers ...	20 to 30	90 to 146 mm. ... (Average 122·39 mm.)	
	83 soldiers ...	20 to 30	86 to 145 mm.) . (Average 114·54 mm.)	
	308		Average 124·7 mm.	
”	16 Army gymnastic instructors	25 to 38	107 to 158 mm. . . Average 129 mm. ...	

Since the table was printed Colonel Deane has examined at my request some persons in ordinary civil life; and, taking twenty-one men engaged in bank work, aged from 16 to 59, found a range of blood-pressure from 126 to 200, ten being 130, the average being 141·7. This, as you see, is much above what he found among the soldiers.

It is generally said that the pressure rises with age, and after 50 the average is considerably above that of early maturity, varying from 130 mm. 145 mm., but it is still an open question whether there is any decided rise in healthy old age.

Colonel Deane has been examining some of the veterans at The Royal Hospital, Chelsea, and I have here the tracings with the blood pressure marked on them, and they vary from 130 to 200, some of them giving the true pipe-stem artery. Very old age is impossible with hard arteries and high blood-pressure.

During the day the blood-pressure is affected by various mental and physical states, which vary with the individual.

Here is a thirteen days chart in which a record of both blood-pressure and pulse-rate have been kept three or four times a day during the ordinary life of a healthy man, and it is surprising how little variation is found, 115 to 140 being the limit, the pulse during the same time varying from 60 to 90, but no correspondence between the two can be seen. During a cold wind the highest point of blood-pressure was noticed, the pulse reaching maximum at 10 p.m. usually. Muscular work increases blood-pressure for a short time, but as a rule in subjects of good condition and training the arterial pressure is often found to be below the average normal pressure, whereas there is nothing so likely to send it up as a sedentary occupation with many hours' confinement to the house.

I have again made use of Colonel Deane in solving the question of the effect of exercise, but before referring to experiments on himself, I note that he has obtained for me a report on the master-at-arms at Aldershot, a perfect specimen of physical development and champion swordsman in the Army, 38 years of age, and his blood-pressure average was 110.

On December 1, 1907, Colonel Deane's blood-pressure was 120 before doing any exercise; immediately after some gymnastic exercises lasting for three-quarters of an hour it was 130 dropping rapidly to 98, and rapidly rising again to 110 when the observation ceased. This work was done before lunch; after lunch blood-pressure was 126. After travelling a long bridge ladder with bent arms—a very hard exercise, though short in time—it rose to 162, falling in about ten minutes to 130.

At 120 mm. is seen the abrupt increase in amplitude, which indicates systolic (or maximum) pressure. At 90 mm. the pulsation is still maximal, but at 80 it is much diminished; 90 mm. is therefore the diastolic (minimum) pressure. In the lower tracing after exercise the systolic pressure is raised to 135, and the diastole to 100.

Some experiments were made on myself to show the effect of amyl nitrite. With the Martin blood-pressure was 126. Three minutes from commencement of inhalation it was 104; it rose suddenly again in next two minutes to 130, fell as rapidly to 104, and an hour later was 116. This sudden fall and second rise has not been noticed before, and I think the rise corresponds to the general flushing that takes place, for the pulse is increased in frequency even before the flushing begins, and much lowered in tention. This was well shown in a sphymographic tracing.

The Erlanger instrument shows the effect of amyl nitrite, with a range of pressure from 120 to 90. It also shows a rise to 130 mm., while one taken five minutes after the maximum pressure was at 105 mm.

Alcohol and tobacco are two interesting subjects in connection with blood-pressure that I shall not dwell upon to-night, but reserve for a future occasion.

PATHOLOGICAL LIMITS.

Pressures from 40 mm. to 400 mm. represent the extremes of tension recorded by reliable observers—the latter being in a case of cerebral hæmorrhage; but when we find a pressure regularly above 160 or below 90 it is time to inquire into the conditions which may be causing it.

Besides the physiological variations which have been mentioned, we find increased blood-pressure in gout and renal diseases. The causes of these we may consider together, viz., a high proportion of animal food, excess of alcoholic drink, inadequate exercise in the open air, want of perspiration and muscular tone and constipation, especially in a cold and damp climate like our own. As a result we have impurities in the blood causing resistance in the arteriocapillary networks and high pressure in the arteries. If this continues we have a change taking place in the muscular walls of the arteries exposed to the pressure, which become hypertrophied, and after a time the intima also becomes affected. We thus get arteriosclerosis developed, a term very loosely applied at present, as it is often used as if it was a separate disease, and can only properly be applied to the arterial changes. Arteriosclerosis is a general thickening of the vessels, and should be kept quite distinct from atheroma, which is a degeneration appearing in patches only.

In the study of blood-pressure many new names have been manufactured. Thus Dr. George Johnson, who was the first to describe the change in the tunica media, spoke of it as muscular hypertrophy. Savill, in 1897, called it hypermyotrophy. Clifford Allbutt, in 1894, described three kinds of arteriosclerosis, and for those with pre-eminently high pressure, the increase being permanent and morbid and not "senile" in character, gave the name of hyperpiesis. Russell, in his book just out, uses for a title "Arterial Hypertonous, Sclerosis, and Blood-pressure;" by hypertonus meaning increased tonicity of the vessel, by means of which the wall of the vessel becomes somewhat thicker, that its diameter is reduced and its lumen correspondingly diminished.

In uterine fibroids the circulatory changes are most marked, and it is curious how must they resemble the gouty conditions, in spite of the great loss of blood that so frequently takes place. There is at first increased blood-pressure, with marked hypertrophy of the heart, but there is more danger in these cases, in the later stages, from degeneration of the muscular walls.

Dr. Purdom has taken notes of some four cases in the hospital before and after operation, the pressure before operation verying from 140 to 160, and after operation 128 to 136.

Neurasthenia I shall not dwell upon to-night, but expect some information from Dr. Burford as the result of his sphygmographic tracings.

In heart disease when valvular trouble is compensated, with blood-pressure instruments—as with the sphygmograph—no special changes are found, but in aortic insufficiency we have as a distinctive feature a low diastolic and a relatively high systolic reading. The range of pulse pressure (i.e., the difference between the maximum and minimum pressure of each pulsation) is always much above the normal. Oliver gives, for example, a case with a difference between the systolic and diastolic pressure of 90 mm., instead of the usual 25 mm. to 40 mm.

LOW BLOOD-PRESSURE OR HYPOTONUS.

I gave the lower limit of range of pressure at 90 mm., and Janeway considers that 70 mm. is very marked hypotonus. Low tension is found with chloroform, wasting diseases, fever, hæmorrhages, collapse in medical work and shock in surgical; and no more interesting subject can be taken up at the present time than the effect of saline injections.

I now come to the question of the comparison of sphygmographic tracings with the results obtained by these instruments in measuring blood-pressure. This has a personal interest for me, for, in 1895 I read before this Society a paper entitled, "Pulse Tension: its importance as an Early Indication of certain Chronic Diseases, and its Recognition by means of the Sphygmograph." This was followed two years later by an article in the *London Homœopathic Hospital Reports for* 1897 on "Changes in circulation leading to breakdown in Middle Life." This was before the days of instruments such as you see before you, and I relied upon Dudgeon's sphygmograph to show the changes taking place in the circulation. Soon after Dudgeon brought out his sphygmograph, I remember his showing me a series of pulse tracings taken during the illness of John Bright with acute bronchitis. The temperature chart and these tracings seemed to give a complete history of this case, and it was easy to follow the progress from them.

In a case of acute nephritis in a boy aged 16, who was in the hospital under Dr. Blackley, the late Dr. Lambert took the three tracings which I show you here. The first one, taken on the ninth day of the attack, shows well the contraction or hypertonus of the radial, the urine then containing abundance of albumin and tube casts. The next tracing was taken on the twelfth day, when, after hot air baths, there was only a trace of albumin present and the œdema had nearly disappeared; the next one, ten weeks later, when the boy was in a normal condition. These three tracings illustrate the progress of the case, and would have been complete if I could have given you the blood-pressure taken at the same time as the tracings, but at that time no instrument existed. In my first paper on "Pulse Tension" I gave tracings with short history of six cases, who were all living at the time. In these the sphygmograph gave evidence of high tension, and it is interesting now to refer to the history of them:—

Case 1.—A man, aged 63, died a few years afterwards of apoplexy.

Case 2.—A man, aged 50, is still alive, but has glycosuria and albuminuria.

Case 3.—A man, aged 48, died of heart failure two years ago.

Case 4.—A lady aged 48, who was suffering from gouty eczema and glycosuria, died three years ago of diabetes.

Case 5.—A lady, aged 47, similar to the last, but seen at an earlier period, has got quite well.

Case 6.—A lady, aged 48, at the menopause showed hypertrophy of heart, had hæmorrhages into the choroid and several attacks of unconsciousness, called a few weeks ago to report herself and said she felt quite well.

The tracings of all these cases correspond, and the one shown may be taken as a specimen of them. My contention in the paper was that we had in these tracings an indication both of the danger and progress of the case ; that unless the tensions could be reduced there could be only a fatal termination, and this happened in three out of the six, treatment in the others having been successful, more or less.

With evidence like this, in spite of what so many say about the use of the sphygmograph, my opinion is that it is of the greatest value in practice. It is quite true that it gives no idea of the amount of pressure, and in many cases may mislead one, as I will show you in a tracing presently ; but besides showing any irregularity of the pulse, the sphygmograph gives some indications whether the pressure is maintained or not—thus in aortic regurgitations. In the tracing you have a complete diagram of the water hammer pulse, where pressure may be very high for an instant, but is not sustained, and hence there is all the greater danger when the arteries have lost this elasticity ; and till we can get an instrument which gives the systolic and diastolic pressure with accuracy, the sphygmograph should not be laid aside.

To return to the question of actual measurements of blood-pressure, you may rightly ask that, while interesting, what bearing has it on actual practice, and how can it be made of practical use? As soon as Leonard Hill brought out his instrument, Dr. Maurice Craig, working among mental cases with it, showed the melancholia was associated with high pressure and acute mania with low pressure; and was able to adapt treatment to the two conditions.

Dr. Oliver, in his "Studies in Blood-pressure," says : "In pulmonary hæmorrhage the study of blood-pressure has taught the inadvisability of prescribing remedies which contract the splanchnic arterioles—such as adrenalin, ergot, digitalis, veratrine, &c., remedies like subcutaneous morphia, calcium chloride and the nitrites being given instead."

Marfan says (*British Medical Journal*, March 21, 1908) : "In pulmonary tuberculosis blood-pressure is generally lowered ; when one finds it normal or above normal one may foresee a favourable termination. To this rule there are few exceptions, and we may say that the estimation of the arterial pressure is one of the surest means of recognizing the curable forms of pulmonary phthisis. A lowering pressure is in most cases an unfavourable sign, but by no means always, as a low arterial pressure does not exclude the possibility of amelioration or even of a cure in the clinical sense of the word."

There is nothing in practice like being sure—it makes the management of patients a much easier thing, and the estimation of the systolic pressure in the following cases was a great help to me.

Case 1.—In June last I was consulted by a lady, aged 58, a friend, who came with her, having informed me privately that she was taking alcohol in excess, and that it would be a great help to the family if I could frighten her. When I found her blood-pressure at 180 mm. it was easy to do this, and the moral effect of the instrument, with the fear of apoplexy before her, has resulted in a complete reformation, with a fall of blood-pressure to 150 when I saw her last.

Case 2.—Mrs. T., aged 55, is at present under treatment. The periods ceased four years ago, but since then she has had heavy mental strains. On February 17 last she complained of headache, being tired and nervous and some difficulty with speech ; there was no albumin in the urine and she did not appear to be ill, and I was surprised to find her with a blood-pressure of 230 mm. A few days later she had a sudden attack of numbness and tingling in the lips on right side, followed by the same feeling in right hand and arm ; her blood-pressure was then 238.

Fig. 3.—This is a slide showing the Erlanger tracing and also a sphygmographic tracing. The Erlanger shows blood-pressure from 220 to 100, but is not satisfactory, as there is no marked distinction where the maximum beats begin and end, and, though the sphygmographic tracing shows some tension, there is no evidence in it of such high pressure. I saw her a week ago, when Martin gave her pressure as 212, and these symptoms had passed away, and I am hopeful that she may get quite over the trouble.

Professor Russell refers to the temporary cases of cerebral symptoms as being due to hypertonus of the cerebral vessels, corresponding to what we see in the systemic vessels, and I certainly think this is the explanation of this case.

Case.—Mr. R., aged 48, an American, sent to me by Dr. Granthem Hill, confessed to a hustling life, having made and lost several fortunes. In September, 1907, he woke up with giddiness and weakness in the left side ; speech was affected and his face drawn up on the right side. He has improved gradually, but has not got back full power, some hemiplegia remaining.

When I examined him on March 11, I found the evidence of hypertrophied heart and general arteriosclerosis, the blood-pressure being 238 mm. A week later his pressure was 210 mm., with considerable improvement.

The Erlanger tracing was taken on the second occasion, and is a better one than obtained in the last case, where I think the small amplitude is due to hypertonus being more marked, with less hypertrophy of the heart. In this case I think there has been an actual hæmorrhage. The sphygmographic tracing resembles the last.

Case 4.—S., a soldier, Colonel Deane brought round to me ; he was suffering from Bright's disease, bronchitis and asthma. His blood-pressure taken with the Martin was 194 ; the pulse tracing was interesting, and it looks typical of a low tension dicrotic, and evidently arises from a dilated heart and shows that reliance cannot be placed upon the sphygmograph alone.

Janeway, at p. 195, says, "that in cases of nephritis, at any rate, loss of compensation is not invariably attended by a fall of pressure."

Case 5.—L.J., aged 74, was sent to me by Dr. Sandberg in July, 1907. He complained about constant uneasiness about the præcordia, with sharp shooting pains like a stab; the heart was much hypertrophied with heaving sounds and a systolic murmur at apex. He had a full bounding pulse, 32 per minute, and Martin's gave a blood-pressure of 290. This is the highest pressure that I have measured, and as it was evidently a case of heart block, which has been receiving so much attention of late, and is considered to be due to changes in the auriculoventricular band of fibres, Dr. Sandberg kindly arranged for him to return a week later, so that Colonel Deane and I could examine him together. This we did, and took tracing with an Erlanger, and Colonel Deane, with Mackenzie's polygraph, was able to demonstrate that the auricles were contracting twice to one beat of the ventricle. We gave him a long sitting, and, I am afraid, in an enthusiasm of investigation, forgot the interest of the patient, for a few days after he had a bad collapse, which he rightly, I think, put down to our examination. With such a high pressure, and the danger (which in some cases may be a real one) of suddenly shutting off the amount of blood which is contained in the forearm, apart from the time we took, the Erlanger may be a very painful process. Dr. Sandberg tells me that his patient died in November, four months after we saw him.

Champion club swinger; taken before and after swinging clubs for twelve hours. The tracing does not show any marked deviation of the blood-pressure from the normal.

We have not yet got a perfect instrument for the determination of blood-pressure. Erlanger's instument gives the most definite results with regard to both systolic and diastolic pressure, but by the tracings shown it is easy to see that the points of limitation of where the systolic pressure begins and ends are not always accurately defined, and it is too elaborate to be used in general practice.

In Martin's modification of the Riva Rocci we have an instrument easily applied, and by which the pressure necessary to obliterate the blood-wave in the brachial artery can be accurately ascertained—though even here we cannot tell how much pressure is required for the arterial wall; but using it in any individual case we can observe any variation that takes place, and thus get useful information. In the short time that I have used it it has thrown light on many a doubtful case, and is a great help in telling of the progress made in lowering blood-pressure when it has reached a dangerous point.—The *Journal of the British Homœopathic Society*, July, 1908.

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THE
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SCIENTIFIC DEMONSTRATION OF THE ACTION OF HIGH DILUTIONS.

By P. Jousset.

(Translated from L'Art Medical, September, *by Dr. Stonham.)*

"For some years I have been seeking for a convincing demonstration of the action of infinitesimal doses. Proofs drawn from a clinical source have always seemed to me deficient. To the most irreproachable observations one can always reply by invoking a coincidence or an error in diagnosis; and if an enlightened criticism demonstrates that these objections are usually only made because the objectors do not wish to be convinced, it is none the less true that clinical proof is of value only for doctors who already believe, and that it for the most part fails when it is addressed to an opponent of the action of infinitesimal doses.

Proofs obtained from the laboratory have a much higher value, and the demonstration which they bring is so evident that it triumphs over prejudice and one-sidedness, and causes absolute conviction.

Why has proof obtained from the laboratory this power? It is because, as Claude Bernard said, an experiment repeated under the same conditions always gives the same result; it is also because it is always possible to verify results announced by conforming to the technique employed by the first experimenters. Hahnemann supports his therapeutic reform upon theories more or less disputed, and on clinical observations, and the results which he has announced are still contested by a great many doctors.

Pasteur re-edits Hahnemann; he treats morbid state with the microbe which produces it (*similia similibus curantur*), rabies with rabies, diphtheria with diphtheria, &c., but he prescribes these curative toxins in the diluted state and employs infinitesimal doses. And no one disputes the teachings of Pasteur. Why ? Because these teachings rest upon laboratory work which is absolutely indisputable.

Therefore, impressed by the considerations we have just mentioned, we have sought once more in laboratory experiments the demonstration of the efficacy of infinitesimal doses, and if we have chosen *Aspergillus niger* and the *salts of silver* for this experiment it is because we have been led to employ them by the advice of Professor Robin. The doctor, whose elevated mind understands all the problems of therapeutics, and who, by his work on colloidal metals, has demonstrated in a masterly way the action of infinitesimal doses, advised us some years ago to repeat the work of Raulin on the influence of *salts of silver* upon the growth of *Aspergillus niger*. It is, therefore, in verification of Raulin's work that we have, after the lapse of some years, commenced the labours the result of which we give to-day.

I recommenced these experiments in the month of January of 1908, and I have tried to make the technique more irreproachable than in the former experiments. I have recollected that, when it is a question of studying variations impressed on living entities, one ought to take count of all the conditions of the experiment; one must never forget that in this kind of work the smallest modifications in the conditions of the experiment can change the results. This is the kind of technique that I have employed in my latest experiments.

We ourselves make the fiftieth dilutions of *nitrate of silver* according to the method of Hahnemann : that is to say, we pour two drops of a dilution into 5 grammes of sterilized water, and we shake the flask briskly so as to obtain a perfect mixture. We take eleven sterilized Piétri dishes (*boîtes de Piétri*). Three bear the label 'Control,' eight receive the first, the second, the third, the sixth, the twelfth, the thirtieth, the fortieth, and the fiftieth dilution. These last dishes each receive 20 cc. of Raulin's liquid, the controls receive 5 cc. more because the dishes holding the dilutions will presently receive that amount as dilution, and the controls and the dilutions should necessarily be equal in this respect. Each Piétri dish receives 10 drops, measured from a drop bottle, of a culture of *Aspergillus niger*, which has been broken up by shaking in Raulin's liquid and filtered through a sterilized cloth. There only remains to add the 5 grammes of the dilution, the first to the fiftieth, as the case may be, and to place the Piétri dishes in conditions of light and heat as similar as possible. From the eleventh to the fifteenth day, varying with the external temperature, when the growth of the aspergillus has ceased to progress, the mycelium of each cell is placed upon a square of paper. Drying is done in the open air, and one must wait until it is complete before weighing the mycelium.

The results which I have obtained this year confirm, in their chief outlines, those obtained in 1903.

The first result, which seems to me henceforth indisputable is that *nitrate of silver*, even in the fiftieth dilution, diminishes the growth of *aspergillus*, so that the weight of the mycelium produced in the dishes cells which have received the dilutions of *nitrate of silver* is always less than the mycelium of the 'controls.' A second result, which had escaped me in my former experiments, and which seems, if not definitely proved, at least to have had new light thrown upon it, is this apparently paradoxical fact with regard to the effect of successive dilutions on therapeutical activity; the successive dilutions from the twelfth to the fiftieth add nothing to the activity of the drug, since the weight of the mycelium is absolutely similar in all these dilutions.

To prove the preceding statements, we will now give the result of the experiments made since the month of January, 1908:

Experiment of January 15.

	Weight of the mycelium
3rd dilution	0 80
6th „	0·75
12th „	0·85
30th „	0·80
40th „	0·75
50th „	0·80

The three controls present the same weight: 0·90.

Remarks.—The growth of the third dilution was delayed, the mycelium having developed three days later than that of the controls, and sporulation having been also delayed by three days; yet the weight of the mycelium reached 0·80, higher than the sixth dilution, which was only 0·75, and lower than the controls, 0·90.

In all our experiments we have noted this delay in the growth of the third dilution; only when the external temperature was very elevated this delay has been but for twenty-four hours. The sixth dilution, which in all the experiments produced a weight of mycelium less than that of any of the other dilutions in the experiment of January, is less than that of the third, twelfth, thirtieth, and fiftieth. But, by an exception that cannot be explained, it is similar to the fortieth, represented by the figures 0·75. The twelfth, thirtieth, and fiftieth present weights of mycelium very much alike, 0·80 and 0·85. All are inferior to the controls, 0·90. The first two dilutions remained sterile, as is always the case.

Experiment of May 22.

3rd dilution	0·27
6th „	0·26
12th „	0·31
30th „	0·30
40th „	0·30
50th „	0·32
Controls	0·37

The same remarks made on the experiment of January are applicable to the third and sixth dilutions, where the weight of mycelium continues the lowest; the twelfth, thirtieth, fortieth, and fiftieth have much the same weights; all are inferior to the controls.

EXPERIMENT OF JULY 6.

3rd dilution	... ...	0·38
6th "	... ...	0·325
12th "	... ...	0·336
30th "	... ...	0·36
40th "	... ...	0·365
50th "	... ...	0·368
Controls	... ...	0·431

This experiment gives results very like the preceding; with this difference that the external temperature, being very high, 25° in the shade, the third dilution commenced to grow twenty-four hours after the others. The weight of the mycelium of the sixth is, as always, the lowest, 0·32. As is also always the case, the weight of the mycelium is greatest in the controls.

We can therefore maintain the conclusions already announced.

(1) Absolute sterility of the first and second dilutions.

(2) Uniformly delay in the growth of the third dilution, with this paradoxical fact, that the weight of the mycelium is greater than in all other dilutions.

(3) The sixth dilution uniformly presents a weight of mycelium less than the other dilutions; it will therefore be more active than the others.

(4) The twelfth, thirtieth, fortieth, and fiftieth give weights of mycelium not quite the same, but very similar. It is remarked that the small differences in weight in these four dilutions are not in regular relation with the dilutions themselves; it does not follow for instance, that there is a regular increase from the twelfth to the fiftieth, but differences occur which are essentially irregular, and arise from conditions of which we are not cognizant. Sometimes it is the fortieth which shows the

least weight (experiments of January and May), sometimes it is thirtieth (experiment of July).

(5) The weight from the dilutions has in all cases been less than that produced by the controls.

Thus our preceding statements are justified; infinitesimal doses up to the fiftieth dilution possess an evident action on the growth of *Aspergillus niger*, and we think we can add that in the present state of science it is illogical to deny the therapeutic action of pharmaceutical preparations which have an indisputable effect on vegetable organic life.

Our second statement, absolutely denying the power of successive dilutions to develop the therapeutic energy of a drug, is established experimentally by the very similar results of the fiftieth and of the twelfth dilutions upon the growth of aspergillus.

(6) The more considerable activity of the sixth dilution is, perhaps, a justification of the much more frequent use, at least in France, of that dilution.

We think that it will be very interesting to apply this method of research to dilutions raised to an extreme infinitesimal, the 100th, 200th, and even 20.000th.

Let us add, finally, that in some experiments previously made I found that the *bichloride of mercury* had a greater effect upon the growth of aspergillus than the *salts of silver*, and that, on the contrary, *salts of gold* seem inactive."

REVIEW.

Waring's Bazar Medicines of India. Edited by CHARLES P. LUKIS, M. D., F. R. C. S.—Sixth Edition. J. and A. Churchill, London. Price 6 shillings net.

Waring's Bazar medicine is a very useful handbook for various reasons. It is useful because it contains almost all medicines that are procurable in the bazar. It is useful throughout India because the names of the medicines are given in almost all the principal vernaculars of India. It is useful because it gives the medicinal virtues of the drugs included in the book. The sixth edition has been edited by Dr. Lukis, the Principal and Professor of Medicine of the Medical College, Calcutta. Dr. Lukis in his preface says that "the advance of medical science in general, the increase in our knowledge of the value of indigenous drugs, and the changed conditions of life in India, which have come about in ten years that have elapsed since the last edition of this work was printed, have all combined to render necessary, in the preparation of the present volume for the press, not only a complete revision of the text, but also the addition of much new matter."

Dr. Lukis being a man of science himself and well versed in his own art could not conscientiously edit this book without thoroughly revising it. That several new drugs have been included in it proves conclusively that the increase of knowledge of the indigenous drugs is a positive fact, but we can not understand what had the "changed conditions of life in India" to do with the revision. Perhaps the editor meant that owing to the "changed conditions of life" the constitutional change has taken place to some extent and an Indian drug should suit properly an Indian constitution. If this be the object in view of the editor, we have one word to say that the revision has not been done in the same spirit. Changed condition of life produces a very great change in our constitution and we believe the medicinal virtue of a plant which produced a certain effect before this change very naturally will produce a different effect altogether.

We also hold another opinion and which may be tested by any scientific man, that the medicinal or dietetic virtues of a plant does not remain the same in all ages and in all places. Chemical analysis may perhaps remain the same but it should be borne in mind that it is not always upon the molecules of carbon, hydrogen, nitrogen, &c., that the different virtues of different plants depend, but upon the very nature of the soil from which it draws its life material. The Science of Chemistry has not yet become so perfect as to enable us to detect even the minutest change in the protoplasmic arrangement of the cells. We will cite here one or two instances to clear up any doubt or difficulty that may arise in understanding what we are driving at.

The Plantain and the Custard Apple are very good nutritious fruits, but an Indian will never eat them so freely here in Bengal, because they will bring on swelling of the tonsils, of the leg and of scrotum. Cold and rheumatism are also brought in very soon by eating these too frequently. But the same man will take those fruits with impunity in any dry higher regions of India. The reason for this can only be that Bengal is a comparatively damp place and the fruits which grow here necessarily imbibe large amount of water and the protoplasm of the cells of such fruits is changed in such a fashion as to produce the injurious results. Simple water in the protoplasm will not produce these but it is something unknown yet apart from water that produces the evil results.

Again, Bael is known to be a very good remedy for dysentery, but this medicinal virtue of Bael has either greatly deteriorated or there are several varieties of it which do not possess the same virtue to the same extent, for we have noticed the very opposite result from the use of it. We should think that the medicinal virtue of Bael has really deteriorated.

Thus we see the study of the medicinal virtues of plants is shrouded in great mist and before a thorough knowledge is gained we must dispel the mist. This will naturally bring us to the question of drug proving.

Proving of drugs upon healthy individual is essential in order that their physiological properties may be thoroughly known. The knowledge of the physiological properties of various drugs, in the Allopathic Materia Medica, is gathered from their actions upon lower animals or from the symptoms produced by them in cases of poisoning. But we must not forget that the nervous system of a cat or a dog or a rabbit or any other lower animal is not the same as that of a man. Hence we should study the physiological properties of the drugs upon healthy individuals.

In these days of advancement of science, all medical men should be free from bias or bigotry. The noblest of all professions is the medical profession, whose sacred duty is to relieve the sufferings of humanity and cure diseases in a speedy and permanent manner. But it is a matter of very great regret that prejudice and dogmatism have taken hold of the profession in the most formidable manner and hence we find so many creeds in our profession. A doctor should possess the highest attainment not only in his own creed in which he has been trained but also keep his mind and senses open to receive new facts which are not known to his own creed. "For there are more things in heaven and earth Horatio, than are dreamt of in your philosophy." So there are several methods of cure and if we study all these methods in the spirit of science, a grand law may be discovered in the future, and that law may be demonstrated as the law of similimum.

The book under review deals with various important drugs, but it would have been well if Dr. Lukis had introduced a few more drugs which are very important and which are very often used, such as the *Gandhal* (apocynum fœtidum) *Jainti* (coronilla sesabania) and *Mukta Jhoori* (Acalypha Indica), &c. Gandhal is very useful in cases of diarrhœa when the soup prepared with the leaves is given to check it.

The leaves of Jainti are used for the absorption of hydrocele fluid. The leaves are baked upon iron pan when they stick to one another and assume the appearance of a sheet. This sheet of leaves is then tied round the Scrotum with good effect.

Mukta Jhoori is a very useful plant. The leaves are used in cases of constipation of children. The leaves are pressed together into the form of a small ball and placed in the rectum when after a few minutes copious stools are passed.

We sincerely thank Dr. Lukis for his labour in this direction and we believe that in a future edition he will add some more of our familiar medicines which are very important.

There is another very useful book long out of print called the "Bengal Dispensatory" by Dr. O'Shaughnessy and we would like very much to see a second edition of it. Messrs. J. and A. Churchill would be the best party to take this matter in hand with Dr. Lukis as its editior. We hope Dr. Lukis will put the profession under obligation by taking this task upon his shoulder.

METEOROLOGY AND DISEASE.

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

August, 1908.

Date.	Barometer. (corrected)	Wind.		Temperature.		Humidity.	Cloud.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·500	S E	5·8	90·5	79·0	89	6	0·25
2	29·544	E	6·4	88·5	80·0	85	6	0·17
3	29·586	S E	6·9	87·5	79·0	93	8	0·56
4	29·636	S E	5·1	87·0	78·5	87	7	0·85
5	29·625	S E	2·4	90·5	78·5	87	7	0·13
6	29·597	E	2·4	90·0	80·5	87	7	*Nil*
7	29·592	E	4·6	91·2	80·0	87	8	*Nil*
8	29·548	S E	3·6	91·0	79·5	87	9	0·83
9	29·496	S	3·6	89·0	80·0	86	8	0·36
10	29·640	E S E	3·7	92·2	80·0	87	5	0·51
11	29·632	E S E	4·2	91·0	80·8	83	6	0.33
12	29·574	E	3·8	90·0	80·5	89	6	0·08
13	29·558	E	4·7	88·0	79·8	96	10	0·38
14	29·606	S E	4·0	86·5	80·2	87	6	0·25
15	29·554	E	4·0	88·2	80·0	91	8	0·18
16	29·510	S E	3·9	89·0	80·0	87	8	0·14
17	29·566	S	4·2	89·0	79·0	91	8	0·50
18	29·622	S S E	3·3	90·0	80·5	85	4	*Nil*
19	29·558	Calm	2·7	92·0	82·2	91	8	*Nil*
20	29·580	E	2·9	91·0	80·5	98	9	0·16
21	29·575	S	4·0	90·0	79·0	89	6	0·57
22	29·603	S	3·1	93·5	79·5	91	7	0·28
23	29·605	S	2·4	91·0	81·0	91	8	0·27
24	29·612	S	2·2	88·0	79·0	93	8	0·92
25	29·611	S	3·8	89·0	80·5	91	6	0·49
26	29·657	Calm	2·6	90·5	82·0	89	8	*Nil*
27	29·541	E	1·0	89·0	81·0	93	8	0·10
28	29·587	E	3·1	90·5	80·0	85	9	0·87
29	29·604	E	4·6	85·5	78·0	89	8	1·77
30	29·647	E	4·8	88·5	77·8	96	8	0·77
31	29·700	E	3·9	86·5	78·2	91	6	0·17
Mean	29·586	78°S 15°E	3·8	89·2	79·8	89	7	TOTAL 12·89

Correspondence.

IS INOCULATION WITH ANIMALISED PRODUCTS JUSTIFIABLE?

SIR,

I have seen various newspapers published in India in which a letter from an able correspondent, Mr. Charles Gane, has appeared, and I would wish to send a few lines in support of this gentleman, who writes as an opponent of the various forms of inoculation which are now being practised in India. It is claimed for some of these (as, for instance, Vaccination and various nostrums used by inoculation or subcutaneous injection against possible attacks of enteric fever, cholera, and plague, etc.) that they are simple agencies which have nothing to set against their supposed value, as protectors against the above-named diseases. On the other hand, we have had in this country a number of societies whose object is an alteration of a law which still forms an irritating element in our social system, and subjects those who object to vaccination to various disabilities which are strongly protested against by the aforesaid societies. There are also several journals, which, during a long series of years, have justified their existence by maintaining an able controversy (both statistical and pathological) against the maintenance by the State of the principle of these much-vaunted prophylactics. I do not wish to say anything hurtful to the feelings of my professional brethren; but I do say with Hippocrates, that our first duty is towards our fellow citizens, and, in fact, we only exist for their advantage and benefit. During a long experience in debating from this point of view, I have not shrunk from giving my own genuine convictions, regardless of the inevitable consequences of financial loss and the sacrifice of legitimate ambitions. If you can spare me space, I will endeavour to show the reasons and fact on which I rely for the attitude which I have assumed; and to avoid, as far as possible, putting down things from a contentious disposition. This is a question of national importance, however, and I doubt if I shall be able to gild the pill sufficiently to satisfy my opponents, who sometimes allow themselves extraordinary freedom of language in defence of what threatens to become not only a grievous monopoly, but a terrible incubus, detrimental to health, incompatible with liberty, and calculated to destroy the best traditions of medicine and of the science of hygiene.

IS ANIMAL INOCULATION BENEFICIAL ?

The present generation is so familiar with the practice of inoculating the human body with morbid secretions or excretions in order to confer a supposed protection against particular diseases, that it may seem strange to hear of any question as to their safety or utility. But I should fail in my duty if, when speaking or writing on the subject, I have no opportunity of judging of the value of the evidence available in relation to it. There is something repulsive in the idea itself, as it almost suggests utilising the contents of witch's cauldron in order to protect ourselves against the common lot of humanity. But, unfortunately, the grievance arising out of compulsory inoculation does not lie primarily in the domain of sentiment. The hard facts are that it never fails to add one more impurity to the blood and thus increases susceptibility to other constitutional diseases, that infant vaccinations are always attended by an increased infant death rate, and frequently an increased general death rate ; and that the new sera and anti-toxins have in numerous instances been attended by serious disasters. It would not be just to suppose that medical men as a body are less conscientious than their neighbours, but when Parliament or an official holds out to them a very tempting bribe, we should require good evidence in order to re-assure us that their judgment has never been affected by this circumstance.

Most persons have heard of Dr. Edward Jenner, the apostle of vaccination, and of late years the name of Louis Pasteur has become famous. Yet Shakespeare's sentiment remains true when he makes one of his characters say that "Reputation is a most false and idle imposition: Oft got without merit, oft lost without deserving."

In France, where Pasteurism had its origin, Doctors A. Lutaud and A. Bechamp of Paris, and other very competent bacteriologists, have strongly opposed his view from the first ; and even now the whole edifice of Pasteurism is in danger of a sudden collapse. In England there has always been a hesitation in accepting the tyranny of the microbe ; and protests have been raised by Dr. John Parkin (Commissioner under the last Queen Victoria for preventing cholera) until at last he was boycotted by pressure brought to bear upon his publisher.

Mrs. Hume Rothery (daughter of Joseph Hume, M.P.) did good work in this direction and afterwards Dr. Granville Bantock and Mr. Lawson Tait gave it the coup de grace from the scientific point of view. But we must not forget the Parliamentary labours of Sir

J. C. Jervoise, M.P. for South Hants, who withstood the slaughter of British cattle and questioned the correctness and consistency of the official reports on the cattle-plague. Nor should Dr. Carl Spinzig of Saint Louis, U.S.A. be left out of our worthies who have knocked the bottom out of a miserable superstition. To him and to Dr. Rodermund (an American ophthalmic surgeon) we owe a number of absolute demonstrations that epidemics take quite a different course from that usually supposed; and that personal contact is quite a small factor in the total result.

Here it will be right to give a sample of Miss Florence Nightingale's trenchant style when opposing the new "sanitation" which sprung from the microbic philosophy. She wrote some introductory remarks on Sir J. C. Jervoise's ppt. on "Infection" in which she expresses herself as follows:—

"When either the witchcraft hypothesis or the disease-germ "hypothesis is made the basis of legislation on the assumption that "any public good can follow from any Acts of Parliament, then the "matter becomes very serious indeed; and the fact of such legislation "being possible can only be considered as a striking proof how "rapidly the (so-called) scientific mind of England is sinking into a "condition of abject superstition. This is not the only evil: "commerce will inevitably suffer to a greater extent than before from "these absurdities unless a check is put upon them."

HOW INOCULATION WAS DEFIED BY SOME BRITISH SUBJECTS.

In order that we may better understand the way in which the vaccination interest has established itself and paved the way for other similar impostures, it is necessary to look back to the time when its insidious devices first began to provoke indignant protests from intelligent members of the community. First among these were three brothers of an Irish family who were members of the Society of Friends, and who have long since departed this life full of years and good works. They were named respectively John Gibbs, R. E. Gibbs, and George S. Gibbs, the last being a distinguished member of the London Statistical Society. When John Gibbs first took up the question of inoculation with vaccine virus he was residing at Grefenburg in Austrian Silesia, and had recently formed a friendship with the celebrated Baron Humblodt (author of Cosmos) who immediately adopted his views, and endeavoured to convince the German Government of the folly of vaccinating their soldiers or of adopting any compulsion in such a doubtful question. He thus expresses himself in one of the famous letters from Grafenburg, showing in another part of the same letter how rapidly they cured their smallpox patients and how entirely they ignored the modern theory of isolating the sick, which seemed to them entirely unnecessary. He says, in reply to a local Registrar who was condemning the poor for the non reception of gratuitous vaccination, "I shall not stop here to inquire how far vaccination is reconciliable with the principles of Religion. I shall indulge in no sneer at the source from which (through inoculation) we have primarily derived it. I shall not stay to consider how far it is answerable for the spread of other diseases, especially scrofula. I shall not even pause to point out in how many cases it has failed in attaining its object. Its total inutility should be a sufficient reason why rational beings should entirely and gladly discard so great a brutality." The next step in the drama was, of course, attempt to discredit the new agitation (now commenced by his brother Richard by founding the "London Anti-Vaccination Society" in Finsbury), by showing that a displacement in age incidence had taken place and that, in this way, a case might be made out for asking for more public money. They, the Vaccinators, found that in Scotland the smallpox mortality had dropped a little, and that a great many vaccinations had recently been performed there. Richard Gibbs, however, was not slow in pointing out that, though disease was not so rife on the surface, the other zymotic diseases had claimed an increased number of victims. "Oh," said he, "no doubt our medical friends have been at their old work, viz., killing the children in order to save them from dying." The third brother, George S. Gibbs, was a terrible thorn in the side of sham statisticians, and, on one occasion issued a pamphlet entitled "foolish Figures of the Registrar General", which elicited from Dr. Farr the honest confession that there was a law of vicarious mortality amongst zymotic diseases, and that the statistics so much relied on were of no practical value whatever. Since this admission was made, many and various have been the noble efforts to fight officialism on this question; but I want to get to the root of the matter rather than weakly attempt to appraise their relative value. France, Germany, Austria, Russia, Switzerland, and America have all their witnesses and martyrs, and England still leads the van; but the whole civilised world is wondering what benumbing influence has fallen upon our efforts, that we are still robbed of much public money, and obliged to submit to dragooning of a very questionable character. It is true that no one dares say now with the late Sir James Simpson, that vaccination has saved 80,000 lives per annum, inasmuch as they cannot prove that even one has been saved by it, but many and abominable are the concoctions, sera, and inoculated anti-toxins which have to some extent taken the place of the original delusion; and we ask what is the explanation of their easy introduction? It is not far to seek. Once admit God Almightly has created microbes (seeking whom they may devour) and which (though eye has never yet seen the great original smallpox germ or vaccinal antidote), are yet only to be combated by other germs equally poisonous; and all the rest will logically follow?

I am, Sir,
Your obedient Servant,
EDWARD HAUGHTON, M.D., B.A., M.R.C.S.E., etc., etc.
Spring Grove House, Church Road,
Upper Norwood, London, S.E.

September 23rd, 1908.

THE FAILURE OF VACCINATION AND OF THE SERUM TREATMENT GENERALLY.

SIR,

I shall be very glad if public opinion in India is roused against the doings of those who think that health can be promoted by putting poison into the blood of the people. I think it is admitted by everyone acquainted with the facts that vaccination is absolutely useless. Everybody in England knows that it does not prevent smallpox. The utmost that its advocates claim is that it reduces the death-rate amongst those who are attacked by smallpox, but this claim is easily disposed of by looking at the returns of those who die from smallpox. In the returns of the Registrar-General, the deaths from smallpox in England during the 20 years ending 1904 were 12,818. Of these only 3,237 are put down as unvaccinated, the remainder are classed either as vaccinated or doubtful.

In India vaccination is equally useless. In the Report of the Royal Commission on Vaccination, P. 203, paragraph 227, there is a reference to "Official Sanitary Reports, India, page 142: Report of Sanitary Measures, India, 1879-80: Smallpox in India is not a disease that can be controlled by vaccination.........As an endemic and epidemic it must be dealt with by sanitary, measures". Further evidence is given in the Report of the Army Commission, Punjaub, 1879, page 186: "Vaccination in the Punjaub, as elsewhere in India, has no power apparently over the course of an epidemic."

Vaccination being thus proved useless, there is no excuse for continuing the practice. If it can be also shown to be dangerous the continuation of the practice is a crime against the people.

Mr. William Tebb, in his book entitled "The Recrudescence of Leprosy" shows how leprosy was spread by vaccination in the Sandwich Islands, India, the West Indies, Brazil, etc. Dr. Tebb (his son) refers to a paper read before the Calcutta Microscopical Society in December, 1890, in which Dr. W. J. Simpson said it was certain leprosy was on the increase. An American doctor who made a study of leprosy in India, found that a very large number of the cases he treated had been caused through vaccination. Arm-to-arm vaccination has fallen into disuse in England, because it was at last admitted that syphilis, a most horrible disease, was largely spread by the operation. Since 1898 calf lymph has been substituted for arm-to-arm vaccination, but according to Dr. Creighton there is quite as much cause for suspicion with this new lymph as with the old arm-to arm method. A great number of other diseases are recognised as likely to be produced by vaccination. These are set out in a standard work by one of the most eminent medical men in England, Prof. T. Clifford Allbutt, in his "System of Medicine" (published by Macmillan and Co. 1897), Vol. II, 562-565, "Effects of vaccination."

Children are continually dying in great agony as the result of vaccination, as is proved by the certificates of the medical men who vaccinated the children, or who attended them during their illness. These cases are not isolated as is shown by a return, dated August 14, 1877 (433) to, the British House of Commons, giving the number of certain diseases (deaths) (1) before vaccination was enforced, (2) after it was made obligatory, and (3) after it was enforced more stringently. These diseases were those chiefly affecting children and the second period showed a marked proportionate increase over the first and the third an equally large increase over the second.

It is not only vaccination that is injurious and wasteful. The inoculations for diphtheria, instead of reducing the number of deaths, have increased them. Many sad cases of children being killed by the anti-toxin inoculations have occurred. In the town of Hull, where the anti-toxin serum was distributed free of charge to the medical men, the result was that the number of deaths attributed to diphtheria increased fourfold. As a matter of fact, the poor people who are inoculated did not die from diphtheria at all but from the poison that was injected into their blood. Similar results have followed the use of inoculations against hydrophobia. The number of deaths has been increased. There are two thousand recorded cases of death following upon inoculation for hydrophobia. As an eminent French doctor remarked: "Pasteur does not cure madness; he gives it." The anti-plague and anti-typhoid serums have also failed. In India the plague has been continued for eleven years by the use of anti-plague inoculations.

People who have studied the question from a really scientific point of view know that the whole business connected with these inoculations is quackery. How long the people will continue to submit to this infamous treatment I cannot say, but in their ignorance they are the prey of the Government supported quacks who make a living by putting their poisons into the blood of the people. The whole thing is too horrible and disgusting for words.

Yours truly,
ARNOLD LUPTON,
Member of the British
House of Commons.

7, Victoria Street, London, S. W.
August 28th, 1908.

EDITOR'S NOTES.

Indican.

The *Medical Times* of September writes :

"Indican in the urine indicates positively that there is putrefactive fermentation of proteid constituents of the food, an abnormality in metabolism brought about, in large measure, by the action of the bacillus coli communis in the intestinal tract, when this microbe is not inhibited by the action of the digestive secretions and their constituent ferments. Indican indicates two important facts—directly, putrefactive fermentation and indirectly defective digestive secretion and loss of inhibitory power over the bacillus coli. A careful study of the indican reaction, states W. H. Porter (Arch. Diag., April, '08), should enable us to diagnose a number of important conditions of metabolism. Dr. Porter described in The Post Graduate (Oct., '07), a color scale which he has devised to be used with the indican test whereby one can differentiate simple putrefactive fermentation, profound metabolic disturbances, impending toxemia and biliary obstruction of various degrees."

The urine test of Indican is a fine procedure of Dr. W. H. Porter. It is a fine differentiation between putrefactive fermentation, profound metabolic disturbances impending toxemia and biliary obstructions. What are the points of differentiation, we think should be published for public use.

Grocco's Paravertebral Triangle.

AT THE meeting of the Italian Congress of Medicine held in Rome in 1902, Grocco drew attention to a sign of pleural effusion which he believed to be new. This is an area of relative dullness extending along the vertebral column on the side opposed to the pleurisy ; it is triangular in shape, with its apex near the upper level of the exudation, and its base at the lower limits of the thoracic resonance. It varies in width from 2 to 5 cm. After the publication of Grocco's observations Rauchfuss affirmed that he has observed it repeatedly in children since 1896, and Koranyi pointed out that he had described it as long ago as 1897. Numerous papers have been published on the subject, including one by Dr. W. Ewart, who found it to be present in a case of lumbar abscess. Other observers have met with it in pneumonia (Hamburger), in subphrenic abscess (Beall), and in association with an ovarian cyst (Smithies). The explanations suggested are either bulging of the mediastinum towards the sound side or damping of the resonance of the thorax in the neighbourhood of the effusion. Roch and Dufour, working in the wards of Professor Bard at Geneva, have confirmed the existence of this sign in pleurisy, but found it present also in pneumonia, and observed that it did not disappear when the fluid had been removed by paracentesis. They then looked for it in normal chests, and state that such a band of relative dullness is constantly present, of course, on both sides of the vertebral column, and assert that it is due to, and coincides exactly with, the gradually increasing thickness of the mass of muscles which lies alongside the spine. If this simple explanation be accepted, Grocco's sign can have no diagnostic value, but these critics make a reservation in respect to children, as they have not yet studied the question in them, and they have too much respect for the careful observations of Rauchfuss to wish to discredit them without going over the same ground; moreover, they admit that in children the muscles in this situation are relatively so thin and the thorax so elastic and yielding that the explanation they suggest may not hold good. They point out also that it is possible that in them the pathological dullness may be propagated to some extent towards the sound side.—*The British Medical Journal,* November 7, 1908.

A Leucorrhoea Repertory.

In the treatment of leucorrhœa, we are too prone to neglect the indicated remedy, and to rely solely upon local treatment, regardless of the fact that there are constitutional reasons for the existence of this abnormal discharge. Little stress is here laid upon color of the discharge, which is as unreliable (with few exceptions) as that of diarrhœa (likewise with few exceptions).

Age.

In infants : Calc. carb.
In little girls : Caulophyllum (profuse and weakening).
Young girls and children : Merc. prot. (yellow).
At puberty : Alumina.
At the Climacteric : Sang. (with flushes of heat).

Acrid and Excoriating.

Aesculus (corrodes the labia); Anacardium (with itching of the genitals), Arsenicum ; Carbo veg. (apthæ of the genitals, smarting, burning, itching) ; Ferrum met. (milky) ; Fluoric ac ; Ignatia (purulent) ; Kreos ; Kali iod ; Lil. tig (*always* excoriating), Myrica (foitid and thick) ; Nat Sulph. (genitals covered with vesicles which become full of pus) ; Polygonum (burning) ; Ranunc. bulb. (gnawing) ; Sepia (*sometimes* excoriating) ; Sulphuric ac. (burning).

Aggravations.

After menses : Aesculus.
In morning after rising : Calc. carb.
Lying down : Puls.
Walking : Aesculus ; Aurum met ; Bovista ; Lac.
Caninum (or standing) : Nat. mur. (inc. while walking).
Anæmic states with scanty menses, Alumina : Helonias (uterine atony).

Accompanied by

Aching in sacrum and knees : Aesculus.

Atony of the uterus : Ambra gris ; Helonias.

Colic : Aloe (with bloody mucous disch.) ; Bell ; Sulphur.

Dragging pains in back : Kreosote (by motion).

Sepia (by motion) ; Medorrhinum.

Eczematous eruptions about the vulva : Graphites.

Headache : Nat mur. (and disposition to diarrhœa, colic and mucous evacuations).

Heat in genitals : Tuberculinum.

Hysterical uterine and abdominal cramps, extending to thighs : Magnes. mur.

Itching : Agaricus (external and internal) ; Aurum. mur (excoriations of thighs) ; Aurum. mur. Hedeonia ; Helonias (with blisters in rectum and discharge of bloody mucus) ; Ratanhia, [illegible] met.

Irritation of bladder and rectum : Erigeron.

Lascivious dreams : Petroleum.

Low spirits and inclination to weep : Alumina.

Labour-like pains : China (painful bearing down) ; Dioscorea ; Kali carb. (extending from back to uterus).

Pain under the left ribs : Ceanothus.

Pressure in vagina during discharge of leucorrhea : Cinnabaris.

Rheumatic pains : Stillinga.

Sexual excitement : Cantharis (burning on urination) ; Murex purp ; Origanum vulg. (masturbation).

Spasmodic pain in uterus : Saracenia.

Smarting : Ant. crud. (down thighs) ; Hepar (at vulva).

Sticking pains : Ammon. mur. (deep in kidney, extending [illegible] ureters and into small of back).

Stitching in genitals : Viola tricolor.

Straining when urinating : Magnolia grand ; Platina (on rising from seat, after urinating).

Sensation of weight in uterus : Actea rac.

Ulceration of os uteri : Leptandra.

Weak back : Oleum jecordis aselli ?

Bland.

Kali ferrocyanatum (like pus, creamy): Kali mur. (thick, milky-white) ; Lamium albune (sometimes with biting in the genitals); Puls. (lying down); Zizia (acrid at first, then copious and black).

Bloody: Cocculus (like meat washings, preceding and following menses); Hamam (vagina tender); Tereb.

Blistering: Kali phos. (with too short menses).

Chronic.

Aeschulus (dark yellow and sticky): Alumina (dryness of genitals); Bovista (sensation as if head were swollen to a great size); Mezereum (corrosive); Nitric acid (*vaginal* flesh-colored); Phytolocca (*uterine*); Solidago (with copious, watery urine).

Clotted: Curare (bumps, size of a hazel nut).

Emaciation and yellow complexion: Alumina; Murex.

Exhausting.

Alumina (rich in albumin); Caulop. (in little girls); Kreos. (very foetid); Robinia (general prostration; bruised sensation in cervix).

Stannum: (weakness in chest while talking).

Gushes, coming in: Gels; Graph; Sepia.

Odor.

Of fish brine: Sanicula.

Foetid: Asafoetida (profuse, *thin*); Eucalyptus; Guarea; Helonias (foul); Opium; Psorinum (large lumps, unbearable odor).

Of fresh green corn: Kreosote.

Pungent: Conium mac.

Sour: Nat. phos. (after menses).

Sweetish: Calc. phos; Merc. corros. (and nauseous).

Pregnancy 1. during: Murex (sensation as if the pelvic bones were coming loose).

Preceded by

Colic: Conium (or accompanied by); Ignatia (contractive pressure in uterus); lycopodium (cutting); Sulphur.

Drawing pains in pubic, inguinal and vesical regions; Coccus cacti.

Movements in abdomen as if menses would appear: Inula.

Pressure in groins: Ratanhia.

Shooting pains in vagina: Ambra gris.

Profuse.

Acon: Alumina (runs down limbs to heels); Caulop. (in little girls); Eupat. perf; Graphites (watery and excoriating); Hapathum;

the common dock (for five or six days, with uterine contractions and expulsive efforts); Murex (great sexual desire) ; Onosmodium; Sepia (in gushes) ; Syphilinum (while walking) ; Tilia europea.

Relief: Iodine (after eating); Merc. (itching by washing in cold water).

Relation to the Menses.

In place of : Cedron ; Chenopodium anthel. (menses suppressed) ; Nux moschata ; Xanthoxylum (increased b. when menses should occur).

With : Derris pinata (menses twice a month).

Preceding : Alumina (stiffens linen ; colic) ; Baryta carb ; Calc. carb ; Carbo veg ; Phos ; Saponaria (24 hours before menses should appear, profuse leucorrhœa with cramps).

Preceding and following menses : Alumina ; Cubeba ; Graph ; Phos. acid (itching).

During : Chin. sulph ; Cubeba (may consist mostly of leucorrhœa).

Following : Aesculus (chronic) ; Eupion (eight days after) ; Gthrea ; Kalmia (one week after) ; Kali ferrocyanatum (*only* after menses, flows by day) ; Lil. tig ; Nat. phos. (honey-colored) ; Pyrogen (bloody, horribly offensive) ; Ruta (after too short menses).

Ropy and Tenacious.

Acon. lueotonum ; Aletris far. (stingy) ; Alumina ; Aranea (viscid); Asarum ; Bovista ; Hydrastis (ropy) ; Kali bichr. (yellow) ; Nitric acid (vaginal) ; Trillium (copious).

Slimy : Senega.

Stains linen.

Agaricus (yellow ; relaxation of the genitals) ; Bovista (green, when checked nasal discharge appeared) ; Lil. tig. (yellow *brown*) ; Murex (green or yellow, with great sexual desire) ; Nitric acid (spots with black edges) ; Sepia (yellow *green*).

Stiffens linen : Kali nitricum (discharged only during pains in sacrum).

Time (compare aggravations).

Morning : Aurum sulph.

Afternoon : Naja.

4 P.M. : Physostigma (with sighing); Puls.

Night ; Ambra gris (most abundant at N.) ; Aurum mur ; Caust. (at *night only*); Merc.

In *day only*: Kali ferrocyanatum; Lac. cannium (*all day*, none at night, even after taking a long walk).

During urination: Niccolum, Platina (on rising from a seat).

After stool: Mag. mur. Murex *(at stool)*.

Motion: *during*; Mag. mur; Mag. sulph; Physostigma; Stronium carb. (walking); Sarsaparilla (walking); Tongo (walking)....

After sitting: Sumbul.

Excited by washing: Melilotus.

Transparent.

Alumina: Ambra gris (bluish gray); Borax (unnaturally warm); Ferrum iod. (like boiled starch); Petroleum (like white of egg); Plat; Puls (*bland*); Sabina (starchy); Viburnum opulus (*except* with every stool, when it was thick, odorless and blood-streaked.)

Unnaturally warm: Borax; Guaco (as if fire were running out.

Watery: Ant. crud. (containing lumps) Castoreum (or thick).—The *New England Medical Gazette*, August 1908.

Infection of a Whole Laboratory Staff.

We get from the *Medical Times*, of September:

The Lancet tells of a remarkable accident which recently happened at Czernowitz in the laboratory for examining food, owing to neglect of prescribed precautions, and transgression of the rules of the institute. Its director-pathologist, employed also at the veterinary hospital, made some experiments with a culture of bacillus mallei, which he supposed to have been killed by carbolic acid. While centrifugalizing the culture at great velocity the glass tube burst, its contents being scattered all over the room. The fragments were picked up by the half dozen persons present. No special precautions were taken, since it was asserted that the use of an antiseptic had made infection out of the question. Yet within three days two of the assistants fell ill; on the following day three more; and the director himself. Two of these patients died; and at the autopsies nodules of malleus were found in the bronchi and the lung parenchyma. The remainder recovered; but Dr. Luksch, the director, had a recurrence after a fortnight, the eruptions occurring on the ear. He was brought to Vienna for treatment, every precaution against infection being taken. The railway car in which he travelled was disinfected at once; and all those who had been in contact with him—his household and family, as well as the railway men in attendance on him during the journey—were quarantined. The clinical symptoms were those of lobar pneumoma; unfounded rumors were for a few days at work that the infection was in reality bubonic plague and not malleus."

There is no doubt that most of the cases occurred from infection of malleus. The precaution of using carbolic soap was insufficient. What we have seen is that frequent washing is the safest procedure.

Pernicious Anæmia in Tuberculosis.

The *Lancet*, September 19, gives the following information:

"At a meeting of the Societe Medicale des Hopitaux of Paris on June 19th, M. Marcel Labbe and M. Agasse-Lafont reported a case in which pernicious anæmia was due to tuberculosis—a very rare condition. A married woman, aged 36 years, was admitted into hospital on April 27th, 1908, for œdema, anorexia, fever, and great weakness. She had never been pregnant and enjoyed good health until two years previously when she began to develop anæmia and to lose strength. After some months megrim, vomiting, and diarrhœa supervened. On admission she was extremely weak. The skin was very pale and the mucous membranes were completely decolourised. There was general œdema which was more marked in the lower limbs. Examination of the blood showed the changes characteristic of pernicious anæmia. The red corpuscles were reduced to 380,000 and were of very unequal size. Their hæmoglobin value was 1·85. Poikilocytosis and polychromatophilia were well marked. There were from two to four nucleated red corpuscles to every 100 leucocytes. The latter numbered from 2500 to 3600 and were almost normal in kind except for the presence of 5 per cent. of myelocytes. The fæces were yellow and did not contain any parasites. The abdomen was very tense and œdematous and showed a collateral circulation. The liver was large, extending two or three fingers breadth below the ribs. The spleen appeared to be normal. In the chest bronchial breathing at both apexes and bronchitic rales were heard. There was abundant foamy sputum which did not contain the tubercle bacillus. The temperature varied from 102·3° to 103·1° F. being highest in the evenings. The pulse was from 120 to 130 and feeble; the heart was slightly dilated. There was slight albuminuria. Though the blood examination showed the presence of pernicious anæmia the temperature pointed to an infection. Cultures made from the blood remained sterile. The pulmonary signs pointed to tuberculosis but the absence of the bacillus from the sputum prevented this from being diagnosed. The fresh marrow of the calf, saline injections, and oxygen inhalations were prescribed. The diet consisted of a litre of milk, the yelks of one or two eggs, and some grammes of raw meat daily. The state of the blood improved slightly and on May 13th the red corpuscles numbered 520,000, but the other symptoms did not improve and the patient grew weaker and died on May 26th. At the necropsy all the organs were found decolourised. There was some citrin fluid in the pleural cavities and the bases of the lungs were united to the diaphragm by recent soft adhesions. The bronchi contained pus. The apex of the left lung was congested and greyish at certain points. The lower lobe of the right lung was very œdematous and showed on its surface fine granulations and in its interior a little caseous tubercle. The tracheobronchial glands formed a voluminous mass and several of them were indurated or caseous. Attempts to find the tubercle bacillus in sections of the lungs and glands proved negative. The peritoneal cavity contained from three to four litres of sero-fibrinous fluid. The great omentum contained small, semi-transparent granulations of tuberculous appearance. The liver showed fatty degeneration of all its cells and peri-and intra-lobular sclerosis and masses of round cells suggesting young tubercles. The bone marrow in some places showed a myeloid reaction. The principal point of interest is the relation of the pernicious anæmia to the tuberculosis. Was the latter grafted on the former, as it sometimes is in leukæmia, or was it the cause of the former? The first hypothesis is negatived by the fact that the tuberculous lesions were old. A moderate degree of anæmia occurs in almost all cases of tuberculosis and is well recognised, but forms of anæmia which dominate the clinical picture are not well known, though they are more frequent than has been supposed. The slightest and the most frequent form of anæmia in tuberculosis is of the chlorotic type; the most severe and the most uncommon is of the type of pernicious anæmia. Between these two are intermediate forms. Only a few cases of the type of pernicious anæmia have been reported. Paul and Rivet have recorded a case of chronic pulmonary tuberculosis in a woman, aged 41 years, in which anæmia supervened. The red corpuscles numbered 488,000 and the blood contained normoblasts, myelocytes, and hæmatoblasts. The necropsy showed pulmonary tuberculosis, fatty degeneration of the liver, and a feeble myeloid reaction of the spleen and marrow."

Tuberculosis producing pernicious anæmia is a new appearance. In the above mentioned case it is an unfortunate fact that bacteriology did not help to diagnose the tuberculous disease. It also appears that persistent effort was not made of the suspected organs for bacteriological diagnosis of tuberculosis.

The Diagnosis of Tuberculosis of the Kidney.

The *British Medical Journal* of September 12 writes :—

"Casper, who has performed nephrectomy in 52 cases and has only lost 5, and only 1 in the last 25 cases, insists that the most important factor in obtaining good results is early diagnosis, which must include an estimate of the functional activity of the other kidney. Tuberculosis of the kidney is nearly always a primary tuberculous affection, and is always limited to one kidney during the early stages. The cystoscope will in some cases show which kidney is affected, and the ureteral catheter allows the urine from each kidney to be separated. Purulent blood-stained urine usually points to the diseased kidney, but if the urine of the sister organ is turbid and contains pus, it may be necessary to inject this into a guinea-pig to determine whether the less affected organ is also tuberculous. Having determined that one kidney is excreting urine containing pus, blood, and tubercle bacilli, it becomes necessary to examine the condition of the sceond organ. This is done by determining the freezing-point depression, the percentage content of urea, the amount of sugar excreted after injection of phloridzin, the degree of coloration after injection of indiocarmine, and the length of time elapsing between the excretion of the sugar and the injection, or between the coloration of the urine and the injection. A tuberculous kidney is frequently not enlarged—in fact, the other kidney is more often enlarged as a result of overwork—so that the diagnosis must not be made to depend on the palpation of a renal tumour. Casper gives the following case as an example of what may be done when it is not possible to diagnose the functional condition of each kidney. The patient, a man, was taken suddenly ill, with pain in the side, followed by fever and rigors. The urine, which was blood-stained, was found to contain pus, albumen, red blood-cells, tubercle bacilli. Neither kidney was palpable. Cystoscopy failed to yield a clear indication of the state of affairs, as it was impossible to wash the bladder out sufficiently to attain a clear content. Ureteral catheterization also failed. After indigo carmine injection it could be seen that the orifice of the left ureter was displaced. As there was reason to suspect the left kidney of tuberculosis nephrotomy was first performed, and two abscesses with caseous foci were found. The cavities were plugged with iodoform gauze and the kidney replaced. The next few days did not reveal any fresh signs, and the patient was again put under chloroform, the ureter clamped, and 0.08 gram of indigo carmine injected into the muscles. After the bladder had been washed out until the water returned quite clear, it was possible to watch the colour of the urine, and in eight minutes it became deep blue and there was absolute proof that this coloured urine emanated from the right kidney. The left kidney was removed and the patient did well. Casper points out, however, that the excretion of indigo carmine is by no means a definite indication that the kidney is healthy. On the other hand, when sugar and the pigment are rapidly excreted, there is no risk in removing the other kidney. This should not be done if the second kidney is only capable of excreting sugar and indigo carmine more slowly than is normal. He is of opinion that in the vast majority of cases all the methods of diagnosis can be applied without difficulty, and then no danger will arise from a want of knowledge of the functional activity of the kidney which is to be left behind."

Surgery is progressing at such a rapid rate, that it is impossible to say where it will end. Even in difficult kidney diseases as tuberculosis, surgical procedure has proved so far successful. Success in nephrectomy is a marvel of surgery.

Rhus Toxicodendron.

The *Lancet* of September 19, says:

"Sir E. Ray Lankester, in directing attention to the poisonous effects of rhus toxicodendron or 'poison ivy,' has caused widespread and unneccessary alarm among uninstructed folk. As a result many suspected specimens of various garden plants have been sent to botanical authorities for identification. In one case the harmless ampelopsis, a favourite suburban climber, was mistaken for 'poison ivy' by a medical man who advised the owner and others having similar plants to have them destroyed. In view of the possibility of mistakes of this kind recurring Mr. E. M. Holmes, curator of the museums of the Pharmaceutical Society, has published a description of the plants. There are three forms of ampelopsis, one of which is the ordinary virginian creeper. They are distinguishable from rhus toxicodendron in that the latter never has tendrils and the terminal leaflet always has a longer stalk than the two side leaflets. The creeper on the walls of gardens having three leaflets with stalks of equal length and provided with tendrils may therefore be regarded as perfectly harmless. The typical rhus toxicodendron is an erect shrub, but there exists a climbing variety in cultivation. Like many other plants of the same family, it contains an acrid juice which blackens on exposure to air. It has a most irritating effect on persons of an erysipelatous tendency or whose skin is particularly sensitive to the bites of gnats and fleas. To such persons the plant is really dangerous, causing a painful dermatitis that in some cases recurs annually. The irritating action has been variously ascribed to acetic acid, a volatile acid substance, a volatile alkaloid, and a non-volatile oily body named toxicodendrol. The fact that some people are affected by proximity to the plant without actually coming in contact with it points to the probability that a volatile constituent is the cause of the poisonous action. Several remedies have been employed with varying success, including the tinctures of lobelia and serpentary and the fluid extract of grindelia. Most relief is probably to be obtained by using an alcoholic solution of lead acetate as a lotion, with the addition of tincture of opium to allay the pain Rhus toxicodendron is not described in Bentham and Hooker's 'British Flora,' and there is but a remote chance of trouble arising in the British Isles from contact with the plant. In the United States, on the other hand, where it flourishes, children are cautioned against the plant, especially when rambling in the woods. In cases of poisoning by the 'poison ivy' vomiting, drowsiness, stupor, dilated pupils, convulsive movements, delirium, and fever have been observed. Homœopathists have largely employed a tincture of the plant in subacute and chronic rheumatism, but Dr. H. C. Wood some years ago gave it an extended trial in the Philadelphia Hospital and was unable to perceive that the patients progressed more rapidly when taking the drug than when they were simply nursed."

The *Lancet* has been kind enough to take the name of homœopathists, but his concluding remarks about the failure of action of the poison is not sufficiently convincing. All homœopathic practitioners have tried the remedy and found it successful in dilutions by internal use. We are not acquainted with the fact of the method of using the drug by Dr. H. C. Wood. The pathogenesis of rhus tox. is also clear. It is late in the day of progress that such futile objection is raised.

CLINICAL RECORD.

Foreign.

"MORE LIGHT !"—STRAMONIUM.

A young woman, at one time a medical student of Cleveland College, who invariably had a hard seige of it every time her monthly period appeared. She was of robust nature, a country girl, strong and hearty, a little given to being mopey, but with good digestion, and good sleep. She came to my office several times and I attempted to correct the difficulty with steel dilators—that being about the time Pràtt was so prominently before the profession. I did not do her any good. I gave remedies to the best of my knowledge; I advised electricity; studied the diet; but all of little service. One morning quite early, the lady with whom she was boarding called on me, saying that she believed the girl had lost her mind, probably from overstudy. When I got to the bedside she didn't know me. The menstruation, as the lady of the house informed me, began in the night and then seemed to stop with a bang, and directly after that the girl began to act queer. How queer? The lady said, wait a few minutes and I would notice for myself. I did. From having chattered an unmeaning stream of words during my visit she suddenly righted herself on her elbow, and began to swear? Say, but she did it to the satisfaction of our Army in Flanders, if I know anything of swearing. Then it drifted off into a song—some everyday melody, but she improvised words and—horrible to say—she wove into the aria perfect, well-rhyming lewdness. Her eyes were strabismic from the disease, whatever it was; she foamed at the mouth; if water was offered she would dash it out of the hand and shudder. The room was in a dark part of the house—a boarding house—and the light was burning. When the frenzy of the singing had abated a little she offered to get out of bed; she was prevented, but the next moment she had herself uncovered, and talking lewdly. I did not wonder that the landlady thought the girl had lost her mind. In order to assure myself of the remedy, although I thought I had enough to build on, I blew out the kerosene lamp. In an instant I had trouble. The girl grew violent, put her hands to her neck, seemed to be choking, and making queer noises. As soon as I could, I re-lighted the lamp and that part of the episode was finished. Here I was, however, several miles from my office, without the remedy which I did not carry—and as I presume 99 per cent. of my readers do not carry. It was winter and before the day of bicycles, so I had to trust the speed of the trolley lines. In brief, stramonium removed all traces of that difficulty, and, so far as I now know it never returned. She has been married a number of years and seems in perfect health.

In this case it was not only the fear of the dark, but the obscene symptom, the talkee-talkee symptom, the strabismus, that accentuated the remedy and made it clear.—The *North American Journal of Homœopathy*, August, 1908.

CATARACT: SULFUR AND CALCAREA CARBONICA.

A boy, aet. 5, presented a complete cataract. When two years old he had had a facial and scalp eczema, which had been cared for with ointments. With the suppression of the eczema, the double cataract developed. An iridectomy was performed by Dr. Vetsch of St. Gall, but the cataract being complete, the operation had no effect on vision, and when I undertook the treatment the child could not distinguish a light placed directly before the eyes. Sulfur 30 and calcarea 30, taken at five-day intervals, returned vision by absorbing completely the opacities of the crystalline within eight weeks.—The *North American Journal of Homœopathy*, August, 1908.

ASTHMA CASES.

In August, a young man came for consultation, who had been suffering for two years with asthma, dating from a forced military march and a subsequent cold bath. On examination, the upper air passages were found free; some whistling rales in the chest. Cough is rare, followed by a little viscid, gray-white mucus. There is great thoracic constriction and pressure. The attacks are chiefly in the morning and particularly apt to occur when in crowded rooms. He also has periodic headaches with the sensation of the head swelling. Argentum nitricum 5x, gtt. v., three or four times daily, caused appreciable amelioration in a few days. September 14, he was seen for the last time. The asthmatic trouble had quite vanished, and I am satisfied that argentum nitricum, now in the 15x, twice weekly, will make the cure permanent. Since taking the drug there have been no headaches.

In the next case, capsicum saved the day. A young woman, aet. 22, suffering periodically every three to four weeks for the last three and a half years from violent asthmatic attacks, each lasting three to four days. Before marriage, she had had slight attacks, but after an abortion a marked aggravation set in. There was present always with her a most disagreeable odor from the mouth; during an attack of cough the respiration was exceedingly offensive and there was also a sensation of chilliness and cold throughout the body. The asthma was better after expulsion of mucus.

A woman aet 65, suffering for fifteen years from asthma somewhat emphysematous. The dyspneic attacks appeared usually about midnight, with great anxiety, palpitation and sequent weakness.

Constrictive sensation in the chest; there was amelioration after the expectoration of a viscid, somewhat saltish, mucus. The attacks were also caused by unusual exertion or by ascending. Mucus rales and difficult expectoration. Arsenicum caused marked improvement. Because of the difficult expectoration, the remedy was later alternated with ipecac. The general condition was much bettered, but owing to the age and weakness, complete cure was hardly to be thought of.

In the next case, the character of the expectoration gave the chief indication for the drug. A man, aet. 43, called on me when in an attack. Had suffered from the complaint four years, the attacks being frequent, two or three times weekly, and almost always in the early morning. The expectoration is yellowish white, viscid, very tough, and hangs in long strings from his mouth. The voice is often rough and hoarse when walking in the early morning. The attacks are more easily excited in cold, damp weather. Kali bichromicum produced immediate betterment; the attacks were less frequent and violent. After 7—8 weeks the trouble had completely vanished, and has not reappeared.

I may add that in all asthma cases I use the lower potencies, 3—5, in frequent dosage; after amelioration, the 10—30x at longer intervals, usually two or three times weekly.—The *North American Journal of Homœopahhy*, August 1908.

CLINICAL CHAT.

A boy, æt. 6, had suffered for three weeks from violent pains in the legs, especially from the knees down; the musculature was swollen, the skin very red, and the least touch painful. The pain was so great that he cries when put on his feet or when made to walk; the ears and lips are very red; temperature 102; much thirst. Four weeks ago he had the measles. The cervical glands swollen. The room, and the body of the little patient, were redolent with the odor of oil of gaultheria with which he had been rubbed, and aspirin and salol had been given without the least relief. A single dose of sulfur 100m, dry on the tongue, given in the evening, permitted him to walk the next day and the pains ceased entirely.

POLLANTIN 3.—Girl, æt. 22, having been a year at Davos for pulmonary tuberculosis, had suffered for a number of years from hay fever, which reappeared this year as soon as the grains were in flower. She had been suffering for a week. Pollantin 3, morning and night, arrested and cured the trouble in eight days, and the young girl was very thankful for the "good remedy."

DULCAMARA.—Woman, æt. 40, had suffered for eight years from a diarrhœa, reappearing every time that she went out in cold, damp, rainy weather. Various drugs and regimes had been employed without eradicating the tendency. Dulcamara 100m, four doses at four-week intervals cured.

SULFUR; NUX.—A file-maker, much exposed to vapors of lead, suffered from a violent pain in the back, radiating into the groins; the abdomen very rigid and painful; constipation marked. The gums show lead poisoning. Sulfur 30m, one dose, followed by nux 200, a dose every three days, greatly ameliorated and permitted him to go to work.

A workman employed in a type foundry complained of a pressive sensation in the stomach and abdomen about the umbilicus; abdominal musculature very hard and tensive. At the same time there is a burning, crampy pain into the groins and along the spermatic cords. He feels much better lying down. Much flatus, whose emission temporarily relieves. For some time he has had cough and expectoration. Sexual desire dormant. Three doses of sulfur 30m, at fifteen-day intervals, and three of nux 100m allowed him to resume work which he has continued uninterruptedly for a year, though constantly exposed to the vapors of lead.

NATRUM CARBONICUM 100M.—A merchant suffered much from the warm, heavy south winds; each time they caused a loss of appetite; desire for sleep, which ameliorated; he had headache, beginning in the forehead and extending to temples and jaws; often better from lying down. The pains were worse towards evening and provoked retching. He felt better in a dark room; was very sensitive to the least noise. He feels the weather change two or three days in advance and is then incapable of work. While in the mountains he felt perfectly well, even during the "Fohn" (vaudoise, or south wind). He took a single dose of natrum carb. 100m, and for eight months has been unaffected by the "vaudoise."

Girl, suffering for two months from metrorrhagia; periods lasting 15—20 days, very exhausting, most abundant in the early morning; sensation of abdominal swelling; blood in black clots. One dose of bovista 100m sufficed.—The *North American Journal of Homœopathy*, August, 1908.

Gleanings from Contemporary Literature.

THE HOMŒOPATHIC TREATMENT OF CANCER.

By T. W. AURWOOD, L.R.C.P., L.M.ED., L.R.C.P., L.M.IREL.

Physician to the Ealing and West Middlesex Homœopathic Dispensary.

Mr. President, Ladies, and Gentlemen,—When the Secretary of your Congress Council wrote asking me if I would read a practical paper on "The Homœopathic Treatment of Cancer," I felt very flattered by the compliment paid to me, and in the first istance I absolutely and positively refused the honour, as I felt the two previous papers being in the hands of our London colleagues, the third should be from the pen of one of our provincial brethren. On second thoughts, however, I felt I was not justified in refusing, seeing that in nearly forty years of practice I have had an exceptionally large number of malignant cases under my care.

The task is difficult, and the subject one it is impossible to do justice to in the limits of a paper "which was not to occupy more than half an hour."

As this paper will be more or less a comparison between the so-called "Orthdox School" and our own, I will at once begin by quoting a few allopathic authorities.

Professor Goss says: "All internal remedies of whatever kind or character have proved unavailing; the vaunted specific of the empiric, and the enchanting draught of the honest but misguided enthusiast, have all alike failed in performing a solitary cure, and the science of the nineteenth century must confess with shame and confusion its utter inability to offer even any rational suggestion for the relief of this class of affection."

Aitken says: "In whatever part the disease may be situated, the general rule is to restore the healthy function of that part and to alleviate by opiates and chloroform or chlorodyne internally. These remedies are for a time successful, but make no impression on the disease, which silently proceeds, until the patient finally limits himself altogether to opium. The quantity of morphia and other narcotics known to have been taken in such cases is something enormous. These large doses usually produce loss of appetite, narcotism, constipation, headache and delirium, so that the patient is only the more rapidly exhausted."

Sir James Young Simpson says: "In the way of constitutional treatment of uterine and other forms of cancer we can do nothing, or almost nothing, except retard and alleviate the course of the malady; nearly every form of vegetable remedy has been tried, with absolutely no success whatever. All that we can do is to keep the patient as near the standard of health as possible by generous diet, by invigorating regimen and tonic medicines, and thus enable the patient to bear up against the debilitating and destructive nature of the disease."

Sir Thomas Watson says: "The treatment of this dreadful complaint can only be palliative, and sooner or later we have to fall back upon opium. Anodyne enemata have often had good effect in relieving pain, or the remedy may be given hypodermically."

Sir William Roberts says: "From a medical point of view the treatment of malignant disease is entirely symptomatic. No cure has ever been effected by any vaunted internal remedies, inoculation, X-rays, or radium. Subcutaneous injections of morphia are frequently called for."

Sir Erie Erichsen says: "All constitutional treatment is certainly useless, and no constitutional remedies appear to exercise any material influence over the disease. Much may be done by palliative treatment towards retarding the progress of cases that do not admit of operation. Preparations of opium, conium and hyoscyamus must be freely administered in order to relieve the patient's suffering and procure rest."

A recent writer says: "We are face to face with a rapid increase of a mortal disease, one universally dreaded more than any other, and for which we have in the majority of cases no remedy whatever."

From the foregoing it is unmistakably clear that any treatment the "old school" can employ is useless, and the only help the patient can expect to receive is from the hands of the surgeon; and in not a few instances even the knife is powerless though the surgeon seems to think that surgery is right and everything else is wrong, and more often than not confesses he is unable in the early stages to diagnose the case, but insists on "immediate operation," that he may submit the result to a microscopic examination. If a case be cured without operation, and therefore without a microscopic examination of the growth, then, of course, our diagnosis is wrong.

We, as homœopaths, can certainly "go one better" than these authorities, for though we do not "lay the flattering unction to our souls" that we cure all our cases we can lay claim to improving the health and so put the patient in a more favourable position to battle against the disease, prolonging life for many years, and making it bearable, without upsetting the whole economy by the administration of opiates.

I will now quote opinions from homœopathic authorities, but the "time limit" only allows me to indulge in a few.

Hahnemann, the revered father of homœopathy, says: "According to my observation the solution of *corrosive sublimate*, *nitrate of mercury* and *arsenic water*, judiciously employed, are the most sovereign remedies for the cleaning of open cancer, as they are for all malignant sores."

Professor Lilienthal, after forty years of practice, says: "There are no remedies for cancer; the individuality of the patient, the cause of the affection, and the concomitant symptoms may aid in selecting a remedy which, for the time being, will alleviate the suffering."

Dr. Bayes says: "There is abundant evidence to prove that *hydrastis* in malignant cases improves the general health and removes the cachectic appearance of carcinomatous patients, and also exerts a powerful influence for good on the glandular system."

Dr. Kidd says: "In an extensive practice during many years with a large number of successful cases, I have been three times encouraged as to the possibility of curing cancer. They were very good cases, the second one of the best I ever had, the patient living for a long time afterwards in perfect health."

Mr. Pearce Gould says: "It has been shown that cancer in the human subject never attacks, in the first instance, perfectly healthy tissues but in all cases it was preceded by certain other definite tissue changes. This was an exceedingly important fact. It did not reveal the actual cure of cancer, but it certainly carried us a very important step forward, and emphasizes the extreme importance of conserving with the utmost care the perfect integrity of the tissues of the human body."

Resistance.—If, then, we are to combat the terrible malignant energy of this disease, the constitution of the patient must be fortified by the most nourishing diet so that the pabulum of the blood may be able by its resistance to neutralize or antidote the germs of the disease, and by this means check the advance of destruction of tissue. We thus build up the patient's strength and so give a better and prolonged opportunity for the action of our remedies. For in almost every case there coexists a vitiated condition of blood which may be rectified by suitable treatment, and in my opinion herein lies the possibility of cancer being preventable, if not curable.

With but few exceptions the digestive and assimilative functions become weakened, there is loss of weight and strength, anæmia is present, together with pain and tenderness; while in cancer of the stomach we get also anorexia, emesis, hæmorrhage, and consequent emaciation.

Mr. Bland-Sutton says: "Irritation, local or otherwise, affecting the tissue may cause abnormal epithelial growths, which, rising above the general level, may produce warts. On the other hand, the epithelial growths may dip into the subepithelial tissues, and on account of lack of formative development, run riot either from decline of vigor or constitutional debility, and originate tissue of low vitality, which we call carcinomata. The conditions favourable to the development of carcinomata are absent in the young, hence in the young we have warts and in the old cancers."

These facts have a bearing on the treatment of malignant tumors. Every homœopathic physician has over and over again cured warts by internal treatment, while by the same methods cures have over and over again been made of tumors in the female breast, an organ notoriously disposed to malignant neoplasms. Here the action of *conium maculatum* cannot be denied, and what is true of this remedy is equally so of many others.

Homœopathic treatment.—Before beginning the *homœopathic treatment*, I must regret the time at my disposal forbids me going into the pathogenesy of the medicines we employ, not that it is at all necessary, as all homœopaths who believe in *similia similibus*, founded on personal provings, as well as by clinical experience, will not require to be told what they all know as well, or better than I do, *why* we place our trust in our *materia medica*. The title of my paper is not "The Homœopathic Cure of Cancer," but the "*Treatment* of Cancer on Homœopathic Lines by the Homœopathic Physician."

Now, as "one swallow does not make a summer," neither does one case prove anything, but when, in a long term of years, large numbers of cases have presented themselves and with the same satisfactory results, we are justified in concluding that our remedies, carefully selected, have done good.

Sir Samuel Wilks says : "If a patient has a chronic disorder which is slowly progressing towards the inevitable end, and a medical man steps in with a certain medicine, and soon afterwards the downward progress is arrested, and is followed by complete restoration to health, or even greatly ameliorated, there can be no doubt that the *remedy* and the *recovery* stand in the relation of '*cause and effect.*' "

The majority of the cases we meet with are either in the female breast, the stomach, uterus, liver, or rectum. In all these cases there is great hope of improvement, and even of prolongation of life, under homœopathic treatment. My experience tells me the pancreas and bladder are not infrequently affected with malignant disease.

CANCER OF THE BREAST.

I must strongly emphasize the great importance of the early recognition of any swelling in the female breast as an aid to diagnosis and treatment. The innate modesty of the patient makes her so reticent that she will for months go on without telling even her own mother or sister she suspects anything wrong, and finally when she has summoned up courage to divulge her fears, it is to one of her intimate acquaintances rather than to any member of her own family. By this time her anxiety has begun to tell on her health, so much so that the cachexia of malignancy has already stamped itself in her face.

When a case of cancer in the breast presents itself to me in its early stages, and before there is much or even no pain, I invariably put the patient on *hydrastis* 1x internally two or three drops of the tincture four times a day before meals, and a lotion of equal parts of *hydrastis* and *glycerine* applied by being painted on with a camel's hair brush and covered with medicated wool. I have this done morning and night.

I give strict injunctions whenever outward applications are employed, that they are not to be *rubbed* in, lest irritation may be set up unnecessarily in the swelling. I also impress on the patient the desirability not to be constantly feeling if the tumour is altered in its size, and not to think about it more than she can possibly help. I also insist on the absolute necessity for the arm, on the affected side, being kept quiet and in a sling.

I have certainly found *hydrastis* 1x very efficacious when persisted in for some weeks, as, besides affecting the breast favourably, it seems to influence for good the faulty nutrition.

Conium Mac.—But if, with the swelling, there is pain in the early stages and an absence of redness, I have found one to three drops four times a day of *conium* 3x, over and over again give marked relief, even more so than *belladonna,* though this last remedy is invaluable when there is great throbbing. *Conium ointment,* B.P., applied on lint is most soothing.

Arsen Alb.—When, however, the pain is of an agonizing burning character—not only in the breast but in the nerves of the brachial plaxus—*Arsenicum Alb.* 3x at the onset, and then later on in the fifth centesimal, is the medicine I rely on for a long period. It is more indicated where there has been at any time eczema of the nipple and areola. Its action on the blood itself, the stomach, and heart, makes it a most estimable "pick-me-up," and this is the name I give it to the patients, who swear by it. This medicine seems to hold the whole trouble in check. If the pains are of a very stabbing character, then *spigelia* 3x is given, but cautiously, as I so often have found medicinal aggravation set up by this medicine if the patient is at all hyper-sensitive to its action, and in that case a higher dilution, the 12th, is more suitable.

Mer. Cor.—As soon, however, as ulceration is set up, with a marked tendency to the breaking down of tissue, I invariably call to my aid *mercurius cor.* 3x internally, and a tepid lotion of 1 in 3,000 of the same externally as a wash, to be applied gently with a glass syringe twice daily. The affected part is then packed lightly with small pieces of lint soaked in the same lotion, and when changed washed out with the syringe. I continue this indefinitely, unless any fresh symptoms arise in the general health calling for other remedies. I have seen the most brilliant results in producing healthy granulation, so that what was once a large open sore has gradually healed, and at the same time the glands in the axilla have quite or almost entirely disappeared. I have a case now of a lady, who came to me twelve years ago, when she had been told by surgeons she must undergo an operation. She was suffering intensely night and day with pain in the breast, arm and shoulder. I at once put her on *conium* 1x.

Conium 1x.—At the end of ten days she comes telling me she "has not had nearly so much pain, though she has a little sharp stinging, occasionally for a few minutes, which soon passes off." The skin over the tumour looked very suspicious of soon ulcerating, which it did at the end of five weeks, and I at once turned to my sheet anchor *merc. cor.* 3x. When any slight bleeding occurred I stopped the *merc. cor.* both internally, and externally, and instead gave *phosphorus* 5 internally and *calendula* externally. If however, the bleeding was more profuse than a simple oozing, I employed pure *hamamelis* or *hazeline.* When the haemorrhage stopped I at once reverted to the *merc. cor.* 3x.

Some patients suffer more pain in the breast at the menstrual period, and at such times I have found *bryonia* 3x. to be the panacea, to the great delight of the sufferer, and that when *belladonna* has been absolutely useless. *Aconite* in half-drop doses has frequently relieved the restlessness and produced sleep, which, when under allopathic treatment, had to be obtained with *opium.*

Mental distress and anxiety in family matters will often produce disastrous results in the organ affected. I have often seen the quiescent tumour roused to activity and pain after some shock or domestic trouble, and in these cases frequently repeated doses of *ignatia* 1x have been the greatest comfort to the patient. For twenty-two years one of my patients had scirrhus of the right breast and no one knew of it except myself and my colleagues. During all these years she took nothing but *hydrastis* Ix, *conium* 3x, *arsenicum* 3x and *mercurius cor.* 3x, according to symptoms, and not until about six months before she died, when she had a period of anxiety and strain, were there any secondary deposits. Then the glands in the anterior mediastinum became implicated with the malignant trouble, and so interfered with the action of the heart that the patient ultimately died.

Two only of my cases underwent operation for amputation of the breast.

One patient, a married lady, lived four years of miserable life, and finally died of cirrhosis of the liver and malignant jaundice. The "violet leaves cure" was tried in this case, but with no good result. The other was a maiden lady who, after the breast had been removed, lived five years. To detail the history of this case and its many and varied phases would fill a volume ; but I refrain.

Besides the medicines I have mentioned in the treatment of scirrhus, there are others, amongst those usually prescribed, according to circumstances, constitution and symptoms, such as *calcarea carb.*, *graphites*, *phytolacca*, and *silicea.*

CANCER OF THE STOMACH.

The range of symptoms in malignant disease of the stomach is very wide and lays a heavy embargo on our *materia medica.* The number of medicines at our "beck and call" is very large, and to differentiate between the various drugs according to the *totality of the symptoms* and constitution of the patient is a very important task in the homoeopathic treatment of the disease. *Arsenic.* 3x is well to the front for the burning pain, vomiting and emaciation so constantly present, though I think *kali bichrom.* 5 runs it very closely, especially so if there is a tendency to constipation and a feeling of nausea when moving about. Both medicines have the same cachexia in their pathogenesis.

For the vomiting I have found *kreasote* 3 of more help than *ipecac.* or *ant. crudum,* though if there be coffee-ground appearances I believe largely in *phosphorus* 5. In some cases drinking hot water, and in others sucking small pieces of ice, is very salutary. Where the patient finds relief from taking food *hydrastis* 1x and *lycopodium* 5 are useful, the former more so if constipation is present, and the latter if there is much distension of the intestines and a sandy deposit in the urine, together with a mapped appearance of the tongue. *Lachesis* 5, too, is indicated by a gnawing pressure, made better by eating, but coming on again in a few hours. The emptier the stomach the more violent the pain, and here *Lachesis* 5 is good.

If *acidity* be a prominent symptom, I think, in most cases, *pulsatilla* 1x is an excellent remedy, especially if the thought and smell of food produces disgust and aversion to eating; though in several cases where *pulsatilla* seemed to be called for and failed *hydrochloric acid* 1x, three to five drops in half a wine glass of cold water, has often been very useful in my hands when acidity is the marked symptom. This is taken before meals. Of *condurango*, *acetic acid* and *lapis albus* and many others, I have had no experience.

Diet.—The difficulty with the diet is such that it is impossible to lay down any hard-and-fast line to suit all cases, so much so that we frequently find "what suits the goose does *not* suit the gander." This difficulty with the diet varies so much with different patients. Milky foods, which one would suppose to be the most appropriate, suit some, while others cannot take milk in any form. Beef tea, mutton, veal and chicken broths, and the like, may be the only nourishment you can get in, but if a plasmon biscuit or a little plasmon powder be stirred in, so much the better. A panada of fish or chicken may agree with some and not with others. I have at this time a lady, aged 84, who has been suffering for some years with a tumour in the anterior wall of the stomach, which is exquisitely sensitive to palpation, and who suffers more from flatulence than vomiting, who finds 2 oz. of fillet steak beaten to a pulp, with a tablespoonful of cream added, and eaten as a sandwich, gives more satisfaction and comfort than anything else. She will vary the monotony by occasionally having a suspicion of anchovy paste smeared on the bread and butter. If she ventures on anything more solid she takes a pinch of Richard's Lactopeptin, with good effect. A calf's tail stewed in new milk and served with parsley butter, with the juice of half a lemon over it, is a most nutritious dish, invariably liked, and is easily digested. When exhaustion is great I find an egg, white and yolk well beaten up, and the tumbler half filled with champagne an excellent "pick-me-up," though egg in any other shape or form cannot be tolerated. When the stomach rejects everything, nutrient enemata or nutrient suppositories will be necessary.

I cannot speak too highly of Valentine's Meat Juice, Horlick's malted milk, and Neave's Food. I prefer a little concentrated nourishment frequently given to larger amounts at longer intervals. I found a mouthwash of one or two dessert-spoonfuls of hock in a small wineglass of seltzer water more agreeable and pleasant than anything else, the patient often exclaiming after using it, "Oh, that's nice!" and if the syphon has been on ice, the better they like it.

If there is constipation I prefer an injection *per rectum* of warm water, or thin gruel with a tablespoonful of Lucca oil stirred in with it. If there is much abdominal distension, I order a tablespoonful of turpentine and salad oil in equal parts to be gently rubbed over the abdomen and then covered with hot cotton-wool. I prefer this to giving any so-called "opening medicines." As outward applications, hot, tepid or cold compresses, according to circumstances, or if in much pain extract of *belladonna* and *glycerine*, I am very partial to.

MALIGNANT DISEASE OF THE LIVER.

Except in the cases of "old topers," and one case of a lady who had suffered for years from diabetes, and who when the sugar ceased to be excreted in the urine developed malignant disease of the liver, I have never seen a case of cancer of the liver as a primary disease; there has always been antecedent trouble either in the breast, uterus, stomach, or other organ. Therefore, in treating the trouble in the liver I always keep in view the primary mischief, and study the patient rather than the disease.

I usually commence my treatment with *nux vom.* 3x and *arsenicum* 3x where alcohol has been responsible, as both these medicines, in my opinion, are antagonistic to the influence of it. *Arsenic.* is very plainly indicated if there is that sense of burning in the liver so often complained of, and accompanied by great weakness and emaciation.

When jaundice is present, whether from pressure or catarrh, I am very much attached to *chelidonium* 1x, having seen better results from its use than anything else. If there is a history of hepatic colic (gall-stone), I at once put the patient on *cholesterin* 3x, 2 grains every night at bedtime. If with the jaundice pneumonic symptoms are present, I then prescribe *phosphorus* 5, which we all know has such excellent effects on both liver and lungs. *Nitric acid* 1x I have found useful if with the jaundice there be constipation and stitching pain in the liver, and a sense of pressure on that organ. *Mercurius sol.* 3x is a reliable remedy, especially if there is any syphilitic history. *Podophyllin* has often dissppointed me.

When ascites is present, and I feel we are nearing the end, paracentesis is called for, though only as a temporary measure. As adjunctive treatment I keep a wet compress over the hepatic region until a red rash appears, when I have it removed, and the part sponged with tepid water, and afterwards covered with a layer of cotton-wool or gamgee tissue. As soon as all the redness has disappeared the compress is again applied. For the irritation of the skin, so often present in jaundice, I know nothing so soothing as a bath of a temperature of 100° F. daily, if the strength of the patient permits it. I think this helps to control the congestion and the catarrhal condition, and frequently, if taken in the evening, gives a good night's rest.

Diet.—The diet has to be regulated to a nicety, and must be non-irritating and free from stimulants, unless great exhaustion is present; then I give a little brandy beaten up with egg and milk. As to drinks, skimmed milk, plenty of cold water or seltzer water if there is a tendedoy to constipation; fresh fruit and most vegetables I allow, except potatoes. As for meat, a little lamb, or mutton without fat, are quite as harmless as a chicken or fish. It is sometimes very difficult to tempt the patient to eat, as what may be enjoyed to-day may be repulsive to-morrow. By taxing one's ingenuity, one many concot a relish, and, if only for a time, something is gained.

CANCER OF THE UTERUS.

Cancer of the uterus is by far the most frequent, and here the female sex has decidedly the worst of it.

In the early stage, as soon as the mischief is diagnosed, I put the patient on *belladonna* 1x and continue it for some weeks, as there is almost constantly a sense of congestive fulness, throbbing, bearing down, with engorgement of the glands in the neighbourhood, and backache, with or without haemorrhagic discharge. When there is much pain and induration involving the ovaries, as well as the uterus, *conium* 1x is a very reliable medicine; the patient always finds it soothing and comforting. *Graphites* 5 and *hydrastis* 1x are both most excellent remedies, the former especially when there is aggravation of pain just before or at the "period," with swelling of the lymphatics, and the neck of the uterus hard and swollen with cauliflower excrescences; the latter *(hydrastis)* if there is constipation and other digestive troubles. *Chamomilla* 3x must not be loss sight of, as I have often found it eases pain when other medicines have failed. In cases developing at the "climacteric," where pressure is intolerable and the pain chiefly located in the left side, running down the course of the nerves, *lachesis* 5 is the remedy. For burning pain in the uterus, accompanied by acrid discharge, light or coloured, or disagreeable smelling, *arsenicum alb.* 3x and *carbo veg.* 5 have done me good service, while *kreasote* 3 internally, and a hot douche of the same drug in the proportion of 1 in 100 as a vaginal injection, have been a great comfort. When either *belladonna, conium* or *hydrastis* is being given internally, I usually employ a suppository made up with the same medicine and passed high up into the vagina—this is done every night or two. When the cervix is much ulcerated I have found *mercurius cor.* 3x and gentle but thorough warm douching for some minutes with the *bichloride* 1 in 3,000, answer well.

For the haemorrhage, which is sometimes very alarming, *sabina* and *secale* have not always satisfied me. I have had far better results from *crocus* 3x and *hamamelis* 1x. Hot douches at a temperature of 110° to 115° F. may act sometimes very promptly, but if the bleeding portion is out of reach the douche is not of much use. I think a hot sitz-bath, when the strength of the patient permits it, is often very useful, and if taken daily so much the better; if at night, it generally soothes and promotes sleep. During the menstrual period great care must be taken and absolute rest enjoined for at least two days, with a vinegar compress applied over the whole abdomen. After the "period" has subsided a warm douche with one teaspooful of Sanitas to a quart of warm water is most comforting.

The patient's whole manner of living demands careful watching. Her dress must be loose and no corsets allowed. Walking gently out of doors, thus getting all the fresh air possible, does no harm. I had a lady suffering from this trouble who was an enthusiastic tennis player and who could not be persuaded to give it up entirely. The only trouble she had after a game was the urgent necessity for the catheter, which she could not do without on these occasions. The whole regimen must be directed to maintaining the strength at as high a pitch as possible, only allowing stimulants when absolutely necessary, and that very cautiously, lest the patient slips unwittingly into alcoholism. The bowels I keep open by allowing plenty of fruit; hot water enemata are useful which I advise the patient to retain as long as possible, as they relieve pain and control in some degree the congestion present.

CANCER OF THE BLADDER.

I have only had two cases of cancer of the bladder, both of which were females. In one the ulceration perforated through to the intestines, so that the fæces were discharged *per urethram*, which necessitated frequent irrigation with Condy or boracic water, and this for many weeks. Both patients obtained more relief from *thuja* 1x than anything else, though *arsenicum* 3x and *conium* 1x were frequently in requisition as indications arose, but when the urine became ammoniacal *chimaphila* 1x was helpful, and *terebene* 1x when hæmaturia was present.

In malignant diseases of the glands in the neck *cistus canadensis* 1x carries off the palm, and in a measure holds the mischief in check, but the rapid growth of the tumour is such that in one case the knife was resorted to, with the result that in a week or two a second and fatal operation was called for.

I do not for a moment presume or expect anything I have said is at all new to my colleagues assembled here who know their homœopathic *materia medica.* My intention has been to show how, with our judiciously selected remedies, we can do without poisoning our patients with *morphia.* In all my years of practice I have not given half a dozen injections of *morphia* in malignant disease to relieve pain. Where sleep has been disturbed, or prevented by restlessness, I have given either *hyoscyamus* 1x or five to ten drops of *nepenthe.*

I do not wish it to go forth from this Congress that what I have said is all that could be said on our treatment, nor that the medicines I have mentioned are the only ones at our disposal. Though the disease is what we have to think about, the constitutional condition of the patient is equally paramount. One symptom does not make a disease; it is *the* *totality of the symptoms* that must not be ignored. When case after case presents itself, and the results are the same, I think we are justified in our conclusions that our carefully selected remedies have done good.

I am fully and firmly convinced that the far-reaching action of our medicines has a great influence in the checking secondary deposits. In the scirrhus case before mentioned there was no sign of infiltration in the axilla for eight years, though I examined for it on every visit; but on March 3, 1904, *i. e.*, eight years from first seeing the case, I find in my notes, "For the first time there is a suspicion of trouble in the axilla."

As homœopaths, we do not assert that we can cure cancer except in the early stages of the disease, but we have the satisfaction of constantly hearing from those sufferers who place themselves under our care, after being previously in the hands of allopaths, the regret that they did not come earlier under the treatment we employ, as they get more relief and freedom from pain while taking our medicines than they did before, and that without *morphia* and *opium*. The general who is the most successful in his campaigns is the one who has the greatest amount of armament and variety of forces at his disposal. So with the physician, he who has an intimate knowledge of our *materia medica* has an arsenal to fall back upon, on which he can rely with confidence to assist him in fighting the enemy, and if not in curing his patients, he can at least give relief.

We, as homoeopaths, have been vilified and have suffered incredible abuse, which we have borne with rare dignity, simply because we have truth on our side and are not ashamed of our principles and practice.—*The British Homœopathic Review*, September, 1908.

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SANITATION IN INDIA*.

BY SIR J. PRESCOTT HEWETT, K.C.S.I.,
Lieutenant-Governor of the United Provinces.

GENTLEMEN,—I am here to welcome you this morning on your assembling in reply to the invitation issued in this Government's resolution of the 6th ultimo with the object of undertaking a comprehensive discussion as to the manner in which sanitary reform should be prosecuted in the United Provinces. We aim at trying to devise some scheme by which, in course of time, the conditions of life may be made healthier for the residents both of towns and villages within the province; we seek some means of giving our men and women more strength and vigour with which to undertake their duties in life and to earn their daily bread, of making their days longer in the land, of endowing them with more stamina, and of insuring for them greater power of resisting disease so as to make them more fit for every form of employment, whether it calls into operation manual strength or the faculties of the mind.

The first thing that must strike every observer is that cleanly as are the habits of a very large number of the people of India individually, they are very prone to ignore what has been well described as cooperative sanitation. Cleanliness of person and of the habitation constitutes only part of the precautions needful to insure protection against disease, and is wholly ineffective by itself if the house is inadequately provided with light and ventilation, and if the out-of-door surroundings and the air that is breathed outside it are contaminated and infective. You have to examine the whole question of how we can improve the sanitary conditions of life throughout our province, to try to determine whether what has been done in attempting this in the past (for a great deal has been attempted) has been on right lines; and if it has not, to consider how we should rectify our past action, and in what directions, in which we may have hitherto fallen short of our duty, we should now endeavour to extend our efforts. The subject is a vast one; few, if any, of the activities either of the individual or the State are not affected by it; and anything that I can say can but touch the fringe of the problems that you will have to consider, and can only, I fear, be directed towards impressing upon you the magnitude of the task you are called on to undertake without suggesting to you the means of overcoming it.

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*A lectnre delivered before the Sanitary Conference of the United Provinces of Agra and Oudh at Naui Tal on September 4th, 1908.

In the resolution summoning this conference stress was laid on the fact that it is impossible to make any certain comparison between past and present vital statistics. The actual record of the number of births and deaths has become much more accurate during the past quarter of a century, but except in the case of a few well-known diseases, the village watchman—the reporting agency in the rural tracts—cannot be trusted to return the cause of death correctly. We can indeed rely on his reports regarding small-pox and cholera being fairly accurate, but he cannot discriminate between diseases, the symptoms of which are accompanied by a rise of temperature, and the deaths attributed to fever doubtless include large numbers due to pneumonia, tuberculosis of different kinds, and many other diseases. Again in the six years between 1902—when plague took hold of the province—and 1907 over a million deaths were reported to have been caused by it. How many really due to it were registered as having been caused by some other disease? Incomplete as the record of the number of deaths attributed to it in the past six years must be, it is equivalent to the normal death-roll within the province for more than six months. This factor of itself precludes close comparison between the figures of the past few years and those of less recent periods, but the former taken by themselves are so appallingly high as to demand the closest scrutiny of all who have the country's welfare at heart.

Speaking generally, the death-rates recorded in the province in recent years, both in urban and in rural tracts, are nearly three times as high as in England and Wales. It is estimated that in India nearly one out of every ten of the population is constantly sick and a person who has escaped the diseases and dangers of childhood and youth and entered on manhood or womanhood has an expectation that his or her life will extend to only 68 per cent. of the time that a person similarly situated may be expected to live in England. Infantile mortality in the province is nearly twice as great as it is in England. I quote these comparisons to show how backward we appear to be in the protection of life as compared with the mother country, but at the same time you will all realise how misleading it would be to judge our vital statistics by results in Europe and understand how vain it is to hope that we can ever attain to the standard that has been achieved in the West. We should never forget that in this province the conditions of life, which depend on the climate and connected matters, are in some respects specially unfavourable to health and longevity. The whole area of the province is 112,000 square miles. Between one-fifth and one-sixth of this is situated in the Himalayas, with a sparse population of a little over one and a half millions. The highest density per square mile—it is only 86—occurs in the Almora district. With a splendid climate and a very sparse population comparatively little remains to be done except to induce the people to pay more attention to the cleanliness of the village sites and their immediate neighbourhood. At the same time the hilly tracts are liable to occasional epidemics of cholera of great virulence which are much assisted by the practice of the hillmen of burying in running streams the victims of epidemic disease instead of following their usual practice of burning the dead. But, speaking generally, the conditions of life in the hills are much more favourable than in the plains. The area of the plains extends to 93,000 square miles and contains a population of 46,000,000. Most of this area is flat and liable to be waterlogged during the rainy season. The mean annual rainfall is between 37 and and 38 inches. The monsoon of three months is wedged in between a period of intense heat all over the province and a period of milder weather which at some places merges at night into one of intense cold. The difference between the maximum temperature in the sun and the minimum temperature in the shade within a period of 24 hours semetimes exceeds 120°; that between the maximum and the minimum temperature in the shade is often 40° or more within the same period. These extraordinary variations in climate and temperature call in themselves for special precautions. They are aggravated by the conditions under which the people live, some of them inseparable from the agricultural operations of the different seasons or for other reasons unchangeable, others the direct or indirect result of neglect of recognised sanitary canons and susceptible of improvement. The houses in which the people live, whether in town or country, are seldom set on a high enough plinth. The average population and the number of houses to the square mile are higher than in any other part of India. The urban population, aggregating a little over five millions, number on the average 13,600 to the square mile, and rise in Cawnpore generally to 37,500 and in parts of the city to over 64,000 to the square mile. What this means can be imagined if you will reflect that in London with its buildings of many storeys the density is but 37,000 and that in Cawnpore the number of houses with more than one storey is comparatively small. The average density of the population in the villages is 427 to the square mile. It rises to 791 in the Ballia district, and exceeds 500 in 22 districts. The average number of persons per house (which frequently consists of two rooms or even of only one) is 5·3 in important cities and 5·5 in the rest of the country. It is estimated that the average superficial area per head of the population is something like 10 square feet, and the breathing space—150 cubic feet—just half what is required in common lodging houses in England. In the rainy season high crops are grown right up to the habitations of the villages. When the spring crops are being cultivated the same soil is, wherever possible, irrigated. Little or no care is taken to arrange for the removal of refuse in the rural tracts. The village pond or tank is the receptacle of every kind : its water is regularly consumed by cattle and even by human beings. The offices of nature are performed in the fields just outside the houses, and the water of the wells is often polluted by the subsoil drainage into them. Flies are always prevalent and at certain times of the year become a pest. They have much responsibility for the communication of disease and are assisted by numerous other insects. Even this is not a complete category of the hindrances to the public health in the rural tracts, but it is sufficient to show how great are the difficulties in bringing about a salutary change.•

I have already sounded a warning note against attaching too much importance to comparative vital statistics in this country, but we must necessarily in approaching the consideration of all questions connected with sanitary improvement keep such statistics before us. The reported mortality per 1000 among the general population works out at the following rates in the last quarter of a century :—

1882-91	32·72
1892-1901	32·56
1902-07 (including plague)	39·01

In the same three periods the mortality in jails has been 25·5, 27, and 16·6 respectively. The difference is marked particularly in the last period. In jails everything is done to avoid overcrowding, each prisoner being allowed a minimum of 36 square feet of superficial area and 648 cubic feet of breathing space ; large sums have of recent years been spent on improved barrack accommodation and ventilation; there is an almost complete freedom from epidemics; the death-rate is not augmented by infantile mortality; food, water, and sanitation are good, and the hours of work regular. We cannot ever hope to get the death-rate among the general population down to the figure that has been attained in jails, but between the death-rates in the jails and among the free population respectively there is a large margin which is undoubtedly capable of considerable reduction. It is towards the most effectual means of effecting this reduction that you are asked to direct your minds during the session of this Conference.

The problem that you have to consider differs very much according as it is directed towards the amelioration of the conditions of life in rural or in urban tracts. The number of villages in the province is 105,068 and the average population of village is just over 400; 37 per cent. of the rural popuiation inhabit villages with a population of less than 500; 52 per cent. live in villages of from 500 to 2000; 10 per cent in villages of between 2000 and 5000; and 1 per cent. in villages of over 5000. There are 453 towns the population of which varies from 264,000 in Lucknow to a population of even less than 1000 and averages about 11,600. These towns are differentiated according as they come under the Municipalities Act, the Act dealing with notified areas that were once but have ceased to be municipalities, and Act XX. of 1856, an Act to regulate police and sanitation in the smallest towns. The Village Sanitation Act applies to certain rural areas; at present it extends to some 600 villages with a population of 2000 or more. In areas other than those under the Municipalities Act or notified areas there is no compulsory registration of vital statistics by private persons. In rural areas the village watchman reports births and deaths on his periodical visits (usually twice a week) to the police stations. In the towns under Act XX, of 1856 registration is effected by the chaukidars employed under the Act, and in municipalities and notified areas there is compulsory registration. Returns are obtained in some towns from non-official practitioners differentiating the cause of death, but an enormous majority of the reports of deaths are made by an illiterate agency utterly incapable of discriminating as to the cause of death.

In the past 25 years there has been large expenditure within municipalities on sanitary improvement; 113 lakhs of rupees (over £750,000) have been spent on capital outlay, 57 lakhs (£380,000) on establishment and repairs in connection with the water-supply; the capital outlay on drainage works has been 57 lakhs (£380,000) and that on establishment and repairs nearly 13 lakhs (£86,000). Expenditure on conservancy has been 215 lakhs (£1,430,000). In rural tracts and smaller towns expenditure has been on a very limited scale. In six of the seven cities with a population of over 100,000 as much as 292 lakhs (£1,950,000) have been expended on these objects, on vaccination, the improvement of markets, and protection against plague. In spite of all this expenditure the death-rates now reported in some of these cities are higher then they were before. Even if allowance be made for better reporting, it is still impossible to gain consolation from the returns.

Still, in the matter of the restriction of diseases against which special measures have been taken both in towns and villages, such as cholera and small-pox, there is room for congratulation on the results achieved. The improvement in the water-supply in cities, the use of permanganate of potassium in wells and of Nesfield's powders have all contributed to reduce the mortality from cholera. This is a disease the deaths from which are returned with fair accuracy. It used to be very virulent among the troops 20 years ago, but a serious outbreak in a regiment is now of rare occurrence. The disease is now usually sporadic and is often due to food contamination by flies. The average death-rate from this cause between 1882-91 was 1·68 per 1000, between 1892-1901, 1·49 per 1000, and between 1901-07, 1·30 per 1000. In the famine year of 1896-97 the death-rate from this cause between September, 1896, and July, 1897, was 0·96; between November, 1907, and June, 1908, it was 0·72. There are only three districts in which famine camps have been seriously troubled with cholera this year. On the other hand, in some of the districts badly stricken with famine which have also suffered from epidemics of cholera it has been possible to protect the famine workers completely. Thus in the Bara Banki district over 3000 deaths were reported from cholera, but only two occurred on relief works; in the Gonda district there were 1900 deaths among the general population and only one on relief works. Here, at all events, there is direct evidence of the success of our sanitary department's work, and it is also to be found in the continued decline of deaths reported from dysentery and diarrhœa, a result which can fairly be attributed to the improvement of the water-supply. 50 years ago small-pox devastated the country and was specially prevalent in the hill tracts. So well protected are the latter now that the district of Garhwal has the highest vaccination rate and the lowest mortality from small-pox in the whole of British India. A great reform effected in recent years has been the substitution of glycerinated lymph for humanised lymph. The death-rate in the whole province from this disease was 1·26 between 1882-91, 0·33 between 1892-1901, and 0·25 between 1902-07. Here again, there is indisputable proof of the good results achieved by the sanitary department in popularising vaccination.

The statistics under the head of fever are the reverse of encouraging. They do not indeed show how many people died from malaria, but they give an enhanced death-rate in each successive period of the past 25 years. Whatever the extent to which this may be due to better reporting, it is most discouraging that the death-rate reported between 1882-91 (24·41) should have risen in the next decade to 25·21, and in the five years between 1902-07 to 26·49. The last figure is an appalling one. It is swelled by lung affections, tuberculosis of all kinds, and (during the past few years) by undiagnosed plague. But after making allowance for all these causes the number of deaths due to malaria is terribly high. Great strides have been made in the investigation of this disease in recent years. The only way known to science for the propagation of malaria is by infection through the bite of the anopheles mosquito. The layman whatever he may think about the possibility of malaria being contracted in other ways must accept the view of science that so far none other has been discovered. Such action as the executive government can take then must be based on the view that what we have to aim at is the restriction of the dissemination of malaria by the anopheles mosquito. I propose to place a medical officer on duty at once to investigate the liability of certain tracts in this province to malaria and to endeavour by special measures, such as the filling up of excavations and other irregularities in the soil, treating mosquito breeding grounds with kerosine oil, the free distribution of quinine and inducing the better classes to protect themselves from mosquito bites by mechanical means to see whether we cannot effect a reduction in the incidence of the disease in these specially affected tracts. This is only one method of attacking the question of how to check malaria, and I hope you will give the problem of how to fight it your earnest attention. I do not propose on this occasion to say much about plague. Between its recognition in Bombay in 1896 and the first year of the present century only 363 deaths were reported in this province from this cause. From 1901 to the end of 1907 the number reported in the province was 1,095,000. The statistics of this disease have recently been dealt with in a published resolution. During practically every month of the past year its attack has been feebler than for six years, and there is certainly hope that we have seen the worst of it.

Of all the vital statistics the most distressing are those relating to infantile mortality. These figures are the index of the sanitary state of a community. The reported annual death-rate of children under one year of age was 229 per 1000 infants born between 1891 and 1900. The figures for the past three years have been 263, 251, and 253 respectively. To some extent the increase has been due to epidemics of measles which have become prevalent in recent years. In the last three years the number of deaths reported to be due to such epidemics has been 22,000, 44,000, and 80,000 respectively. But, whatever the cause, it is lamentable that one out of every four children born should die before he or she has completed a year of life. Infantile mortality is indeed enormous in every country. Even in England and Wales the annual death-rate was 153 per 1000 infants born between 1891 and 1900, and 132 in 1906. Here, as in England, the mortality among infants is higher in urban than in rural tracts, and specially high in industrial centres, where women work in factories and have to neglect the care of their young children. In Cawnpore the average death-rate during the past five years was 365 per 1000. In addition to the general difficulties in the matter of improving the sanitary surroundings of the people, we have here to contend with the immaturity and ignorance of the mothers, most of them being constantly employed on work both up to the child's birth and while they are suckling it, to the want of skilled midwives, to inadequate and dirty appliances used at the time of delivery with the result of inoculating the child with tetanus, to the prolonged period for which a child ordinarily remains at the breast, to the poor clothing of infants, to their exposure to various sources of infection, and to the neglect of the treatment of their diseases when they are attacked. This is truly a formidable list of obstacles to the growth of a child of the poorer classes to a healthy maturity; and many of them cannot be removed for a long time. But this should be no reason for our failure to look the problem in the face: to my mind, it is the most important one to be attacked, if any improvement is to be effected in the health and vigour of the race.

The facts I have just enumerated are depressing enough, even if there is a crumb of comfort to be gained from the success of our efforts in effecting a reduction of the death-rate in cholera, bowel diseases, and small-pox. But hitherto we have only been looking at the death-rates, and if you will turn your attention to the birth rates you will see reason for thinking that the efforts towards sanitary improvement made during recent years have not been altogether without fruit. Our reported birth-rate is almost the highest in India. During the period 1882-91 it exceeded the reported death-rate by 6·07 per 1000, and in 1892-1901 by 5·97 per 1000; but for the plague it would have during 1902-07 exceeded the death-rate by 8·33, but it actually exceeded it by 4·54 only. It is reasonable to argue that the more than proportionate increase in the birth-rate is to a material extent due to the improvement of the people. If the results of the sanitary measures instituted or undertaken by the Government have not been as remarkable as we could wish them to have been, this is, at all events, not due to any lack of interest in the matter. The question of sanitary reform has, indeed, been constantly before the Government ever since the report of the Royal Commission on the Sanitary State of the Army in India was published 45 years ago. The principle adopted by the Government of India as long ago as 1879 was that it was undesirable to resort to stringent legislative or administrative measures to enforce village sanitary reform, and that until the sanitary condition and healthfulness of towns had been generally brought up to at least a fair standard, and the objects of sanitary reform had become more generally understood, it would be unwise to do more than to endeavour by precept and advice, on every suitable opportunity, to secure improvement of the sources of the water-supply in villages, the systematising and rendering innocuous of the habit of resorting to the fields to obey the calls of nature, and the improvement of the surface drainage of village sites. The experience of the past 30 years has demonstrated over and over again that it is useless to attempt to dragoon the people into taking sanitary precautions. Violent remedies are of no service to sanitary progress: if advance has been slow let us hope it has been sure, since one thing of all others is certain, and that is that it never can be quick. We can never move over the people: we must move by and through them.

A Sanitary Board was created nearly twenty years ago as a consultative body for the province: it was contemplated that, when considering the sanitary requirements of a particular revenue division of the province, it should be strengthened by the addition of members to represent such division. One duty that was expected of it was that it would carry out a sanitary survey in selected parts of the province. Something much more definite than has yet been attempted seems to me necessary in this latter direction. The constitution of the board has been altered from time to time, but its working has not been successful hitherto, and my observation of its proceedings in recent years has convinced me that its system of transacting business has become more and more formal. The Government of India has determined that the time has come when the constitution and functions of the board should be reconsidered,. a step which seems to me personally most desirable. In particular it is essential that the non-official community should be adequately represented on it. The Government Sanitary Department consists of a sanitary commissioner, two deputy sanitary commissioners, and a large vaccination staff. It is for consideration whether the department should not be enlarged and its functions extended. In municipalities large sums of money are spent on ill-organised and badly equipped establishments. It is proposed to constitute a sanitary service, the members of which would be utilised for service in the different municipalities. All these matters connected with establishments are among those on which your advice is sought by the Government.

Although laws will not in themselves make people follow sanitary principles, they are necessary to insure the proper fulfilment of rules with which the people have become familiar and generally recognised to be in the interest of the community generally, as well as for raising of funds and to give legal authority to acts undertaken to improve the public health. I have mentioned the Village Sanitation Act and the sanitary provisions of the Municipalities Act. There are also Acts relating to lodging-houses, to water works, and to sewerage and drainage. The Government is about to relieve small towns to which Act XX. of 1856 applies of the charges for police, and their revenues (some three lakhs of rupees=£20,000 a year) levied under that Act will be available for sanitary purposes. This change involves a change in the law and your opinion is invited as to the manner in which this should be carried out. It will also be open to you to consider whether any changes are needed in the Village Sanitation Act or in the provisions of the Municipalities Act regarding sanitary matters, or in any of the other Acts that I have just referred to.

As you are aware, the Government of India made to this Government, beginning with the current financial year, a grant of five lakhs (£33,000) of rupees a year to be devoted to sanitary improvements. I have determined to begin with an endeavour to improve the congested areas of certain of the larger towns by cutting broad roads through them. Schemes are in an advanced stage and will soon be commenced in Allahabad, Lucknow, and Cawnpore. I am also providing the Benares municipality, which has done a great deal in this direction in the past 25 years, with funds to cut a single road in the city. We hope to facilitate traffic and the perflation of air through these cities, to clear out specially insanitary areas, and to erect a few model dwellings on sanitary lines. Some people consider the erection of model dwellings at all to be a work of supererogation. I cannot agree with them, any more than with those who go to the opposite extreme and expect the State to take up the work of house building on an unlimited scale, and to arrange for a general housing of the population of towns in suitable buildings. All that we can try to do is to build a few—a very few—buildings suitable for different classes at a moderate cost, and to look to the public and builders to copy the models. Papers regarding this proposal will be placed before you. So far the great difficulty has not been overcome—viz., that of designing sanitary house for the poorest classes at a cost which will not make its rent prohibitive. Other methods of improving conditions in towns that suggest themselves for your consideration are regulations to preserve a minimum space for new houses, to provide for building on standard plans, some form of encouragement to people whose houses are specially well kept, the strengthening of the authority of the health department and the more efficient enforcement of municipal by-laws for sanitary purposes, better markets and more supervision of the sale of articles of food and drink, and more complete drainage and paving schemes which are essential before the benefits of a filtered water-supply can be fully enjoyed. In rural areas the provision of pure water, the drainage of the village site, and attention to simple rules of conservancy are the chief requirements. Here, too, it would be well to have some definite area fixed for all new houses, and if possible to prevent excavations from being made except at a considerable distance from the village site.

Above all, throughout the country we want to teach the people to look after themselves; to educate them in the principles of simple hygiene, and to induce them to abandon insanitary habits. We may pour out money like water on sanitary improvements all to no purpose if we do not get the people to realise that they are for their good. Let us not forget that such success as has been attained in England is due to the general readiness of the people to believe that sanitary regulations, irksome though they may appear, are designed for their good and must be obeyed. By what means can we best lead people of this province to understand this first principle of all sanitary progress? Instruction of the young at schools and colleges will not be without its effect, but what is really needed more than anything is that the educated members of the community should bring home to the poorer classes the merits of practical hygiene. That has been well defined to aim at "rendering growth more perfect, decay less rapid, life more vigorous, death more remote." In season and out of season those who have learnt the lesson that without sanitation there can be no moral or material progress should preach to the public on the text that health means happiness. With stronger sinews the daily toil of a generation reared under more favourable conditions than those of the past will become more easy. So shall the earth be led more readily to bring forth her increase; here, we may surely hope, lies the road towards industrial progress throughout the land. The goal may appear to be far away, and indeed it is, but let us make a start on the road towards it; I feel sure that we could put no nobler aim before us.

DRAWING AS A PART OF MEDICAL TRAINING.

One fruit of the cessation of war in Europe and North America for a considerable period has been the multiplication of international congresses. During the last three months only, not to speak of the period previous to it, annual meetings of no less than fourteen such congresses have been celebrated. Among this number was a Drawing Congress the third annual meeting of which was held in August last at the Imperial Institute, together with an Exhibition in connection with it, which was opened in the Royal College of Arts and adjacent buildings at South Kensington. The object of this Congress is to encourage the study of Drawing, or the representation of objects by lines and shades, not merely as a fine art but as a means of general culture and as an aid to the trades and professions.

In India there is a tendency to look upon Drawing merely as one of the fine arts—as an intellectual recreation depending on the labours of imagination. In many of the high schools it occupies a very insignificant place in the curriculum, and in the colleges and higher institutions it is neglected almost entirely. This remark is applicable to England also to a certain extent. But in America and the Continent of Europe, generally recognised as the most civilised portion of the globe, Drawing occupies "a place second only to writing in the education of the young, and is regarded as a natural means of training the mind of the child in habits of accuracy and observation," as a very useful appendage to most of the professions and as "the indispensable language of craftsmen." (B.M.J.)

Carlyle says, in his usual characteristic way, that Drawing is the most valuable of all studies which are calculated to inculcate a love of truth. It certainly tends to create a habit of close and accurate observation and of patiently delineating things as they are in all their minutiœ—a habit very useful in our every day occupations and essentially necessary to success in many of the higher walks of life.

Following the example of English educational institutions, the colleges affiliated to the universities of this country provide for education in arts, sciences, law, medicine and engineering, and Drawing is one of the prescribed subjects in the entrance or matriculation examination. Though success or failure in that subject does not affect the success or failure of the candidate, the usefulness of Drawing is recognised* and a student admitted into the classes of an Engineering College, who has failed to pass a preliminary examination in, or to shew some knowledge of, or taste for, Drawing, has to contend with manifold difficulties in getting on with his studies.

The Engineer has to deal with the principles of construction, and his ideas or designs are carried out by artisans or workmen. It is necessary therefore that these ideas or designs should be explained to the artisans, and the easiest and best way to do it is by lines and shades, that is, by Drawing. In a word, the Engineer's pencil is the guide to the tool of the artisan. Again, one of the most important and interesting duties of the Engineer is to observe and delineate the first signs of weakness in structures whether fixed or moveable, and to record graphically the different stages of it before failure is the result. For all these and other purposes it is essential for the Engineer to be dexterous in the art of Drawing.

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* We regret very much to find Drawing omitted from the Matriculation Course laid down by the Calcutta University in the New Regulations as contained in its Calendar for 1908, with effect from the year 1910. As this Art, so essential to the professions, unless cultivated in boyhood, can hardly be acquired in after life, we would urge the University, which has already recognised its value to the teacher, the engineer and the medical man, to reconsider its decision and restore to Drawing at least the place it has so long occupied, namely as an optional subject.

Teaching as an art is gradually rising in importance and is being built on a broad scientific basis, and a very high standard of qualification for the teaching staff is now demanded by the best educationists of the day, among others by the University of Calcutta, which proposes to grant degrees in Teaching and to have Training Colleges affiliated to it for the purpose of bringing up a sufficient number of properly qualified teachers. As true education embraces, not the development and cultivation of our physical, intellectual and moral powers only, but of our aesthetic faculty also, and as the latter has the beautiful in nature for its field of action, no teacher is deemed efficient who has not some knowledge of Drawing.

In the medical profession where exactness of conception and a habit of close observation are so necessary, the advantages of a knowledge of drawing are very obvious. As the *British Medical Journal* observes (*vide* number for 18th July 1908, page 167).—"The pencil not only develops the mind, but it trains the hand. The child who has been taught to draw well will make the skilful zootomist, the neat histologist, the able anatomist, and the dexterous surgeon. There are many men who have all the mental attributes of great surgeons but lack the necessary manual skill—a skill which, unless developed in childhood, can never be attained in manhood. The hand that takes up the scalpel should have been trained by drawing, by wood carving, by labour in the workshop, or by similar pursuits," and thus rendered fit to give the finishing touch to the superior attainments of the medical practitioner.

The principal subjects taught in a medical institution are physics, chemistry, botany, anatomy, physiology, materia medica, pathology, medicine, surgery, midwifery, jurisprudence and hygiene. A medical student who has a knowledge of drawing, can make sketches of physical and chemical apparatus in his notebook, and these will be of great help to him when he studies the abstracts of the lectures. Even in the examination, "a good diagram, even though it has no artistic merit, may save him lines of description" and thus enable him to answer the questions more fully and intelligently so as to secure a high place for himself.

In the study of botany and anatomy the utility of drawing is still greater. No intimate acquaintance with the structure of plants can be obtained unless "botanical sections are sketched, and floral diagrams correctly made." Moreover a sketch may remain fixed in the mind when the verbal description or the actual object has passed out of recollection, and a whole course of lectures may be rapidly revised with the help of an illustrated notebook. With the practice of drawing every object of interest, the habit of correct observation, so very necessary to the medical practitioner as well as the scientist, is gradually developed, as has already been observed, and the student's dependence on his sketches grows with his progress in his biological studies. "In the dissecting room too, rough sketches can be made of each aspect of the dissection, and these sketches can be further elaborated at leisure and the whole collection made into a sort of anatomical album." Each of these pictures will bring the original back to the mind, and anatomical details instead of gradually growing hazy and indistinct will remain fresh in the memory. If these drawings be "supplemented by occasional photographs, which can be stereoscopic if taken with a twin camera," the value of the album will be still more enhanced.

The subjects studied in the later stages of a medical student's career are better attended to in the wards, and here he will find constant opportunities of exercising his pencil to his great advantage. "In the ophthalmic clinic," to quote the *British Medical Journal* again, "every typical fundus should be rapidly sketched, and the sketch should be coloured. The poorest attempt, if made by the observer himself, is of more value to him, with the original ever in his mind, than is the most beautiful painting in an atlas of opthalmoscopy. In the skin department the moderately skilled painter can collect typical examples of all the ordinary diseases, and he will have his drawings as standards of comparison all his life."

A student who carefully paints the diseases will notice features which an ordinary fellow worker with no knowledge of drawing will overlook. He is sure to attain a successful clinical life, and to push his way into the first ranks of the profession; and if he becomes a professor in a medical school and demonstrates his lectures by accurate diagrams, his pupils will be able to acquire an exact knowledge of the regions demonstrated, and if they copy the diagrams themselves their knowledge will become still more accurate and retentive. The late Professor Sharpey whose name in connection with Anatomy is familiar to every medical man wherever found, had this qualification in a high degree. "The beautiful drawings in coloured chalks which he used to make on a huge black-board will be vividly remembered by the old students of the University College, London."

Again, medicine is one of those progressive sciences which are making rapid strides at the present time. It is therefore most necessary for every conscientious medical man engaged in actual practice to attend to lectures at post-graduate colleges and to keep himself abreast of the advancement of his art by this and other means. To enable him to do this he must have recourse to drawing as one of the efficient means. Thus in every department of the healing art and from many points of view a knowledge of drawing is important to a medical man in a high degree; and an intimate acquaintance with this fine art together with a sense of the beautiful which a familarity with it tends to inspire, cannot but produce "an ennobling and refining effect on his mind, and contribute to develop that sympathy with sorrow and suffering which is the grandest attribute of the profession." B.M.J.

METEOROLOGY AND DISEASE.

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

September, 1908.

Date.	Barometer. (corrected)	WIND.		TEMPERATURE.		Humidity.	CLOUD.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·601	S E	3·3	87·0	79·5	89	6	0·25
2	29·744	E	2·3	90·0	80·0	87	6	0·02
3	29·804	S E	2·3	80 0	79·0	85	7	0·16
4	29·765	S	3·5	91·0	80 0	84	4	0·10
5	29·604	S S W	3·9	91·2	81·0	81	7	*Nil*
6	29·703	S	4·2	91·5	76 0	98	10	0·95
7	29·744	S	1·6	86·0	76·0	88	5	0·83
8	29·781	S	1·5	89 0	79 2	91	7	0·84
9	29·757	S	3·4	90 0	80·0	84	7	0·02
10	29 722	S S W	3·9	91·0	82·0	85	7	*Nil*
11	29 726	S	3·4	92·0	78 2	86	8	0.42
12	29·723	S	0·4	89 5	82·0	91	8	0·01
13	29·740	E N E	0·7	90·5	80 0	89	7	0·18
14	29·784	S S E	1·7	90·0	80·0	96	8	*Nil*
15	29·811	S	1·3	88·0	79·6	89	6	1·48
16	29·753	S	1·6	90·0	81·2	88	6	0·15
17	29·725	Calm	1·1	91·0	81·2	89	8	0·35
18	29·777	E	0·8	89·0	81·0	91	8	0·01
19	29·806	S	1·6	89·0	78 0	91	3	1·15
20	29·776	S	1·9	90·0	79·0	87	3	0·45
21	29·745	Calm	2·6	92·0	79·8	85	5	*Nil*
22	29·768	Calm	1·7	91·0	80 5	76	2	„
23	29·758	N	1·5	92·0	82·0	76	1	„
24	29·727	N	1·8	93·0	82 0	88	8	00·4
25	29·700	Calm	1·7	90·0	78·2	83	2	0·17
26	29·718	E	2·8	91·5	79·0	72	8	0·07
27	29·720	E	2·4	88·0	80·0	91	8	0·02
28	29·816	S E	1·8	87·8	79·0	96	6	0·06
29	29·725	S E	2·2	90·0	80 0	88	8	*Nil*
30	29·717	W W S	6·6	90·0	81·8	80	7	„
Mean	29·741	47°S 25°E	2·3	90·0	79·8	87	6	TOTAL 7·73

EDITOR'S NOTES.

A Scientific Priest on the dangers of holy water.

The sanitary dangers lurking in "holy water" have often been referred to by medical men. They have recently been scientifically studied by a monk, Fr. Augustin Gemelli, who is himself a highly qualified medical man. He publishes his results in the *Scuola Cattolica.* Each cubic centimetre of holy water in the basins in the church of Santa Croce, Turin, taken from the surface contained 150,000 microbes, while a cubic centimetre taken from the bottom contained no less than 6,000,000 microbes. He injected this water into animals and found that it always killed them, the causes of death being tuberculosis, colitis, or diphtheria. He does not think a daily cleansing with corrosive sublimate sufficient, but recommends a new form of holy water receptacle so constructed that persons instead of dipping their fingers into it can obtain three drops of water by pressing a button. A vessel of this nature has been placed in the church of Vergiate, Milan. Fr. Gemelli turned his attention also to the grilles in the confessional boxes. Water which had been used for washing these only contained 25 microbes per cubic cetimetre and when injected into animals only proved fatal to 10 per cent. of them.—The *Lancet*, October 10, 1908.

Reading in bed.

Reading in bed at night is, speaking generally at all events, an unhealthy practice as we have previously had occasion to remark and there is fortunately a tolerably universal consensus of opinion amongst the public that the habit is better avoided. Probably the fear of its being the cause of a conflagration of the bed curtains and perhaps of the whole house has had something to do with the feeling against it in the past, and the danger no doubt was an obvious objection in the days when flimsy bed curtains were fashionable and when the electric light, which is practically free from such danger and which does not vitiate the air as gas and oil lamps do, was not available. Dr. Hugo Feilchenfeld of Berlin has recently made a study (recorded in the *Medicinische Klinik*) of the subject with the object of finding out exactly what harm is likely to result from reading in bed and in what circumstances the practice is most injurious. He finds the chief danger is to the eyes, partly because the light used is frequently insufficient and so placed as to dazzle them, and partly because it is difficult to hold the book so that full benefit is obtained from the use of both eyes. This is more particularly the case when the reader is lying on one side. Again, there is generally a temptation to held the book too close to the eyes and this of itself tends to induce myopia. Very particularly is this result to be feared in the case of young persons whose eyes are not fully developed. For this reason boys and girls under 18 should be strictly forbidden to read in bed. Of course, persons suffering from errors of refraction—myopia, hypermetropia, astigmatism, and so on—are liable to increase the trouble by indulging in the practice. Notwithstanding all the objections which can rightly be urged against reading in bed, there are many aged, anxious, worried, and bedridden people to whom it would seem cruel to deny what may perhaps be almost their only luxury for fear of inducing some slight error of refraction. In these cases care should be taken that the light should be sufficiently brilliant the eyes being shaded from it, and that the patient should lie on his back with the head and shoulders raised. In this way the dangers may be minimised. Referring to reading in bed in the daytime in ordinary cases of illness, how often do we see a patient, the foot of whose bed is towards the window, struggling with a book or newspaper held between himself and the light so that his eyes receive the glare of full daylight while the only illumination of the printed page is that due to the diffused light in the room! A suggestion that during the daytime or part of the daytime the patient's head, together with the bolster and pillows, should be transferred to the foot of the bed is often gratefully received, as not only is reading rendered much more pleasant but the change of position and of aspect night and morning is almost always agreeable, relieving as it does to some extent the irksomeness of confinement to bed.—The *Lancet*, October 10, 1908.

CLINICAL RECORD.

Foreign.

CLINICAL CASES.

BY E. A. TAYLOR, M. D.

Case I.—Metrorrhagia.—Miss W., aged 31, had uterine hemorrhages some years since, for which an operation was performed, consisting of the removal of several uterine polypi. This corrected the trouble for some months; it then returned as bad as before. A second operation was productive of similar results, and the surgeon consoled her with the statement that she might have to have an operation once a year.

The symptoms were as follows: Hemorrhage of bright red blood, comes in gushes, followed by a clot. The hemorrhage would cease for a short time, then start again, sometimes worse than others, but never ceasing entirely for any length of time. As she expressed it, she never knew when her monthly periods came—she was sick all the time. She was exceedingly nervous, there was much twitching and jerking of muscles, and she was troubled with insomnia; some nights would not sleep at all. The flow was worse from motion and very offensive.

She was pale and anæmic; any emotion, pain or apprehension would cause her face to assume a death-like pallor. The bowels were regular but the appetite was poor, except for certain things; she craved pickles and stuffed olives, would eat ground coffee by the spoonful and used much salt, even salting her pie. She had a sensation as if the white of egg had dried on her face and the skin would crack if she were to laugh. She drank a great deal of water and was fond of lemonade. Mentally she was greatly depressed; could not tell her symptoms without crying, and when I attempted to console her, assuring her that she could be cured, she put up her hand protestingly, saying, "Don't! don't! if you talk that way I shall never quit crying."

Her headache was in the temples, worse in hot weather; was of a throbbing character, seldom associated with nausea, but was worse from light and noise and from sleep. She wanted to do everything in a hurry and would frequently drop things from her hands. She craved the fresh air and felt better out of doors. She frequently puts her tongue out while talking as if to moisten her lips, and says she is always hungry with the headache.

She received nat. mur. im, one dose dry on the tongue. In twelve hours the hemorrhage had greatly decreased and in thirty-six hours it had ceased. From that time on she menstruated regularly and normally. The dose of medicine was given five years ago.

Several remedies might be thought of. For the pronounced anæmia with the mental depression, weeping, nervous and hysterical state, intermittent flow, etc., one might think of ferrum, but the ferrum patient's face, while very pale while she is in a tranquil state, becomes fiery red on any disturbance; mental or physical, while this patient would take on a death-like pallor. The craving for sour things would contra-indicate ferrum, which loathes sour things. The amelioration in the open air, desire for sour things and tearful disposition might make some think of pulsatilla; but pulsatila likes consolation—this patient did not; pulsatilla is thirstless—this patient was very thirsty; to the pulsatilla patient everything tastes too salty—this patient covered her food with salt, even her pie. So giving particular attention to the peculiarities of the mental symptoms as Hahnemann directs, the symptom-complex led to natrum mur. and the result was all that could be desired.

Case II.—RECTAL FISTULA.—Mr. J. M., aged 38, came to me for examination and treatment He said that for two years there had been a "leakage" from the rectum and he had been compelled to wear a pledget of cotton to absorb it. On examination a fistulous opening was found about one inch from the anus through which a probe could be passed into the rectum. He also had hemorrhoids which were more pronounced on the right side.

He had had gonorrhea years ago, for which he had taken old-school medicine externally, internally and eternally, with the result that the hemorrhoids developed, together with obstinate constipation, bleeding from the anus during stool, long lasting burning after stool and a sense of awful constriction of the anus, which would last for hours and often kept him awake all night.

His pulse was slow, often 54 when quiet, and his urine had a very strong odor and was highly colored. He received benzoic acid, 30th, and this remedy cured him in less than a year. The fistula healed, the hemorrhoids, rectal pain and distress and the constipation all disappeared and have not returned after ten years. In this case there was little chance for doubt or comparison, for to one who is familiar with the action of *benzoic acid*, the picture is so striking as to be readily recognized.

Case 3.—OVARIAN TUMOR.—Mrs. K., age 32, married six years, no children. Husband is healthy and denies any venereal taint. Mrs. K. has been troubled for more than a year with sharp, stinging, shooting pains in the left ovary, which have been growing worse and distress her greatly at times, but she is always relieved during the menses. There is some pain in the right ovary at times, but not nearly so much as in the left. She eats well, sleeps well, looks well and her bowels are regular. I inquired about her desires and aversions but could learn nothing of importance. I asked if she ever drank any beer or wine, when with much animation she told me that she dared not touch wine, that one swallow would cause such a commotion and distress in her ovaries that she could scarcely endure it. She said, "it seems the effect all goes to my ovaries."

She had been examined by three good old school doctors who said she had an ovarian tumor and must go to the hospital at once and have it removed. I examined her and found the left ovary as large as an orange, sensitive and painful to pressure. The right ovary was not enlarged.

She received *zincum met.* and in less than a year no tumor could be found, she was free from pain and well.

Case 4.—EMPYEMA.—One evening several years ago a homeopathic physician who is an excellent prescriber, telephoned me asking me to come and see his son eight years old who was ill. On inquiring what was the trouble he replied "he has pneumonia, this is the nineteenth day, he is getting worse and I fear he is going to die." I hastened to his home, where I found the boy pale, thin, restless with many symptoms pointing to many remedies. On examination the left side of the chest was seen to move less with respiration than the right, the intercostal spaces on the left side were obliterated, there was flatness on percussion over the lower two-thirds of the chest on that side, with an absence of vocal resonance and tactile fremitus over the area of flatness. The heart was displaced to the right and he had a temperature of 103 with increased respiration and pulse rate and frequent sweats. I advised the doctor to get a surgeon, which he did; a rib was resected, a great quantity of greenish, offensive pus evacuated and drainage maintained. The temperature fell within a few hours and the boy made an uneventful recovery. What would have been the result without surgery?

Case 5.—EMPYEMA.—J. S., age 12, had been ill for some weeks, under the care of an excellent prescriber of our school, when I was asked to see him in consultation. The appearance of the patient, the history and the physical signs were much the same as in the last case, only the trouble here was on the right side and in the right mid-axillary line at above the fourth or fifth interspace; there was a pronounced bulging as large as one's fist with fluctuation plainly perceptible. The diagnosis was empyema; the treatment advised, surgical. This was about ten o'clock at night, and about two in the morning the doctor was called to find that the pus had broken into a bronchial tube and the boy was expectorating great mouthfuls of pus. A surgeon was called who made an external opening and drained it, and he seems in a fair way to recovery. How much better it would have been had the surgeon been called early.

Case 6.—OSTEOMYELITIS.—Mr. W. S., age 20, a well developed, well nourished German laborer who could not speak much English, was taken sick with what was thought to be pneumonia. I saw him after he had been ill a few days and he had, in addition to a temperature of 103 with pulse and respiration somewhat increased, a severe pain in the left arm on the outer part above the elbow. It was red, circumscribed, swollen and wonderfully sensitive to touch; the pain was intense all the time, but very much aggravated by touch or motion. He kept the arm bent at a right angle all the time; the pain was so intense, he would tremble all over at times and could not help crying. The pain and swelling were not in the joint, but a few inches above it.

I advised the doctor who is a homeopathic physican, to call a surgeon, saying I considered it a case of osteomyelitis, but the doctor thought it was rheumatism, and continued to prescribe what seemed to be the indicated remedy. It was only after some days' delay, when secondary infection had manifested itself in the other arm, both legs and elsewhere, that the gravity of the situation was realized and a surgeon called; pus was evacuated from many places, but too late. The patient died. An early operation might have saved this patient's life. It is not as culpable to neglect surgery when needed as to use it when not necessary? A time for everything and everything at the proper time should be our motto, and we should know not only therapeutics, but diagnosis and surgery also—be doctors in the fullest sense of the term.—*The Medical Advance.* October, 1908.

Gleanings from Contemporary Literature.

AN ADDRESS ON HOSPITALS; PUBLIC MEDICINE AND MEDICAL STUDIES.

By Sir T. Clifford Allbutt, K.C.B., M.D. Cantab., Hon. D.Sc. Oxon., F.R.C.P., Lond., F.R.S., &c.,

Gentlemen,—It is one of the noble attributes of the human mind never to rest contented with an achievement, be it never so useful, never so glorious. The old Manchester Infirmary, which happily escaped the division so injurious to some other hospitals, was as famous in its great physicians and surgeons, and in its generous and enlightened benefactors, as in form it was stately and in its history monumental. Yet the mind of your citizens, thankful as they have been for a great past, would not rest contented on form and history; gazing still insatiably into the future, contemplating the new scope and potencies of modern medicine, both personal and national, reading the principles on which this progress had been, and is being, made, and the signals of these ever-widening ranges of knowledge, power, and beneficence, Manchester men, in alliance with their University, are inspired to build yet more stately, to endow more richly, and thus to organise that still vaster compass of charity, of learning, and of municipal and national efficiency which I have visited and to which I have the great honour of bearing witness to-day. Thankful, nevertheless, as I have said for a great past; but while these words are passing my lips the most ardent pilgrim will pause for a moment as, in the visions of his memory, are reflected the figures of those strong companions who so lately were breasting the hill with us, but whose hands are now dropped and whose familiar and prophetic voices are fallen into silence. Manchester and Manchester University, even after the loss of such men as Leech, Dreschfeld, Harris, Ashby, Cullingworth, Jones, Collier, will be more and more; notwithstanding we are haunted by the pathos of human life and death, wherein they, who of all of us knew best how to rejoice in your new hopes and new promises, have lately been taken from us; and we are left to rejoice, if by no means alone, yet without their wise counsels, without the enthusiasm of their presence. And yet I repeat "by no means alone." It is indeed the older men, such as he who now addresses you, who see most vividly, and feel most keenly that the fountains of life ever renewed, and of progress reinforced and accelerated, have their springs not in our generation but in the hands of eager young men whom year by year and day by day your University bears in its pride. And if sometimes in their naughtiness these ardent youths are inwardly disposed to scorn our ingatherings, to despise our experience, and even to hold our wisdom in suspicion,—well, it is better than if they had fed themselves with our formulas and fondled our idols. Social development has always been discontinuous, and a succession of slightly explosive generations is better than the alternative of revolution, of catastrophe by longer accumulation of pent up stresses.

Hospital Management.*

Permit me on the threshold of this new infirmary to make a few remarks on hospital purposes and management. Of the management of the Manchester Infirmary I know nothing, and under this head no word of mine can be charged with censure or innuendo. I speak generally when I say that a prevailing error in hospital government is the failure of the lay managers to act in frank and equal partnership with the medical managers whereby the full co-operation and best results of money and knowledge are more or less sacrificed, the machine runs with needless friction, and occasionally jams. In this matter the lay governor is a little apt to be arrogant, a little purse-proud. Yet, after all, money is but the raw material, to be worked up with knowledge. Upon a hospital board laymen, even wealthy laymen, may come and go and be noted of no man; whereas such changes in the hospital medical staff would be promptly disastrous, for the layman's hospital is a stationary hospital.

That money is of more value than knowledge is a vulgar and erroneous notion; yet in our partnership too often the lay manager presumes that the physician or surgeon is at the hospital not his partner but in some sort his servant. Occasionally indeed he is ungenerous enough to depreciate the equal benevolence of the medical services on the ground that if unsalaried they "pay" in profit and reputation. But do we find that in other professions public officers as a clerk to justices, for instance, as a solicitor to a great banking company, as a consulting engineer or chemist to gas or water works—are unsalaried, because the office carries with it opportunities, reputation, and fees! By no means. The other day I asked a distinguished physician and a distinguished surgeon on the staffs of two leading London hospitals if it paid them, however indirectly, to devote thus their priceless services for the sick and for the raising up of successors like themselves? They answered almost in the same words, "The time I give to the hospital costs me 20 or 30 guineas a week"—surely a more than ample pecuniary recompense for any promotion in earlier years. Moreover, even in London, and more generally in the provinces, a man of parts and address, starting independently of a hospital, has opportunities of material gain on the average as good as, and quicker in return than those of his fellow student who, more disdainful of commercial balances, at the hospital devotes himself in the first instance to science and charity. Yet it is on these men that the virtues and the honours of a great hospital chiefly depend.

Let us put it more plainly; a lay man, with a purse in his hand, and a physician stand on either side of the bed of a sick man. The layman offers to spend £ 5 on the patient if the physician of his learning and benevolence will convert this cash into means of solace and cure. Neither partner is of much use to the sick man without the other. The man with the banknote cannot, it is true, allow the physician to spend the money uncontrolled; but on the other hand, without the physician his money would be wasted. The partners, then, are not master and servant, but comrades; and if with many banknotes and many patients a great healing engine is created, the principle of frank and equal partnership is not modified. If the expert, after the manner of experts is prone sometimes to forget the relative proportions of things, to push ideas beyond the limits of common sense, to be importunate, or even extravagant, the layman on his side is as prone to be domineering, meddlesome, and short-sighted. Everything in the healing machine costs money, and the layman must regard the ultimate economy of it; but as everything in it also therapeutical whatsoever he may do or avoid affects more or less directly the treatment of the patients; whether it be, let us say, the heating and ventilation, the decoration of the walls, or even the baking of the bread and the quality of the blankets. Unless, then the lay manager keeps incessantly in touch with the medical he will continually make little mistakes and large blunders. Now do we, generally speaking, find this broad and continuous counsel between these partners in large hospitals? Do we not too often find on the contrary a lay board shutting itself up by itself, and week by week proceeding to business without conference with the honorary staff; acting, indeed, sometimes as if the staff existed only to do what it is told; a custom surely discourteous as well as mischievous to the business the two partners have at heart. How, then, should concord, mutual understanding, and harmonious and efficient cooperation be maintained? At Leeds every member of the honorary staff is, *ex-officio*, a member of the weekly board; thus at every board one or other of the staff is sure to be present; so that if any innocent-looking proposal be made which in so complex a machine might react prejudicially upon the welfare of the sick, a warning note is heard, and the proposal is deferred or modified. Larger issues are discussed, on due notice, by full boards of lay medical members, with frank and equal interchange of opinion; but the staff vote is properly limited,—in my day to eight, the eight votes being readily distributed among the staff at the discretion of the members present; votes being of course, allotted first to the members of any special department chiefly concerned in the issue. The result during my experience was that no cool breezes chilled the cordial partnership between board and staff in that successful hospital; nor was there any loss of efficiency by cross purposes or conflicting opinions.

The next counsel I would offer is that a lively and effective sympathy be manifested with scientific aspiration and invention, even by lay managers who may be unable to perceive the purport of particular, or indeed of any researches. To speak personally, I shall never forget the almost comic astonishment of a certain weekly board to whom some 40 years ago I appealed for a very modest outfit of electrical scientific apparatus, and at a later date for means of registering surface temperatures by electrical thermocouples, of recording continuous curves of bodily temperature by watchwork, and so forth. Bit by bit I did indeed get something of what I wanted, but with a delay and tediousness that crippled my endeavours. Now, I pray you to belive that no money is better expended than small sums allotted to investigation by young men of scientific ardour whose education in method is fairly adequate. If it does little more than keep the junior staff and their pupils active and curious the outlay is well rewarded.

Clinical Pathology.

And thus I am led naturally on, not merely to urge in general terms the alliance of clinical medicine with scientific research, for this is a counsel not needed in Manchester, but to advocate in particular a far closer intimacy and cooperation than at present exist between the physician and the pathologist. Since a few of us, some years ago, began to urge the creation of clinical laboratories close to the doors of the wards, something no doubt has been done; but it has been done, in my opinion, awkwardly and very partially. Herein I think the medical manager, as sinning against the light, is more to blame than the lay, so that the pathologist—I speak not now of morbid anatomy which has long enjoyed every advantage, but of pathology in its dynamic aspect—the pathologist in this sense is kept aloof from the patient whose processes it is his main business to interpret; and the physician, with morbid anatomy nearer his elbow, has been losing something of the sense of disease as dynamics, which, with all their fantasies of vapour and humour, was apprehended by our ancestors of the last two or three centuries. Of late years a remarkable integration has begun, and is rapidly proceeding, between anatomy and physiology; and, if medicine is to advance as it has been advancing, the same integration must be created between static pathology, medical practice, and dynamic pathology—the pathology of processes. That the pathologist must investigate the sick man in whose body these defects and perversions are at work seems too obvious for assertion. Yet when some few months ago I asked, somewhat ironically I fear, of a distinguished pathologist in a great university if he had free access to the wards of the hospital, he replied "If I were to set foot in the wards there would indeed be a pretty hubbub in the staff." So the pathologist, at arm's length in a laboratory down the street, working, as it were, in a balloon, and fed upon occasional crumbs from the hospital table, never sets eyes upon the concrete problems which it is his business to solve. There seems to be an opinion abroad that the pathologist, who has never approached a patient since his graduation, can by some esoteric ingenuity put together the conditions of these problems in his laboratory; or indeed under these purer conditions find more comprehensible explanations. To endeavour in the laboratory thus to reproduce problems in simpler terms is a valuable part of scientific method; but surely it is a truism that such researches, unless incessantly tested by the touchstone of nature, are apt to lead at best to conclusions as abstract as the ingenious conditions out of which they arose are artificial. In the simpler sciences, it is true, such methods go farther; a mathematician, in no way conversant with machines, may often enlighten an engineer; but even in the simplicity of mechanics the shortcomings of mere academic methods soon become conspicuous: how much more crippled then must be the academic pathologist who is denied full conversance with those infinitely more complex and multifarious machines we call plants and animals! It seems absurd to labour such a point as this, and in a university so vigerously empirical as Victoria; still as we have long ceased to be surprised at the absurdities which convention and tradition maintain even in the hardest heads, even here these counsels may be useful.

How, then, are we to abolish so fallacious a distribution of work? The physician, who in the earlier phases of scientific medicine proved himself, on the very principles just proposed, to be the ablest of pathologists, can no longer, in the vast extension of the field, devote himself fully to pathological research. It is all he can do to coordinate its discoveries with clinical practice. Moreover, the field of qualitative clinical work is filling up, and progress now depends on the far more arduous and exacting quantitative appreciations. Both physician and pathologist, each by his own methods, must work in the ward at the facts; the pathologist must have almost as free a run as the physician—almost as free, for ultimately, of course, the physician must govern all that concerns the patient's well-being—and must accordingly have a laboratory of first instance in the neighbourhood of the ward; his departmental and research laboratories will, of course, be elsewhere, yet not so far away as to estrange him from the patients. By this concert the outlook of the physician himself, his assistants and his classes, would be continually enlarged, and the attention of the pathologist as continually riveted upon those signals, criterions, contingencies, interdependencies, eccentricities, lapses, glimpses, which in the laboratory no ingenuity can forecast or reproduce, but in which the practical and empirical physician has his being and justification.

And what is true of the hospital is no less true for private practice. It is not fair to the pathologist, it is not fair to the patient, in cases, let us say, of biochemical disorder, of vaccinal therapeutics, of obscure toxic processes, and so forth, to pick the brains of the pathologist at second hand. The pathologist should be summoned to take his proper part in consultation, with the family physician, and any other consultant, all upon equal terms. So far as circumstances and the old customs of private practice permit, it is my endeavour to bring this about, and, if expenses must be kept down, the medical consultant may be permitted to resign a few of his visits to the pathologist, who, by the way, is anything but a rapacious person.

OUT-PATIENTS.

Of the departments of a great hospital that which is most rudimentary, rudimentary almost to chaos; that in which the evil, which in this world attends upon the good, survives most manifestly, and is perhaps increasing ; that which on many grounds is open to the censorious criticisms of medical men outside its walls and of the public, and indeed of the hospital staffs themselves, is the out-patient department. Physicians resent all that savours of quackery, at any rate in medicine ; yet is there any custom more apt to engender and to foster quackery than to encourage mobs to wander round our halls for potions to be hugged to their bosoms as charms? In not a few cases, it is true, these herbs and salts have some virtue ; but in how many are they not stock recipes, either wholly futile or at best impotent as auxiliaries against unwholesome habits and conditions of life which the physician, unable to ameliorate, gets weary of denouncing? Too soon he learns to say to himself, "Poor creatures, errant or sinful, God help them, I cannot ; yet if pill or potion be a comfort to them, or a hope, by all means let them have it." And the quackery does not end here ; unhappily it permeates upwards into higher social ranks, to the degradation of scientific therapeutics.

In respect of the out-patients, hospital abuse, by persons able to pay for advice, is perhaps exaggerated ; still, by direct provision or by means of provident dispensaries, some of them might be induced to obtain the more individual and discriminating aid of physicians living among them, conversant with them and their ways, and with the external causes and conditions of their maladies. Thus, by treatment of a more comprehensive kind on physiological lines, vulgar notions of the laws of life and disease would be enlarged, and some health would be compassed not for the body only but also for mind and character.

Hitherto I have been considering the out-patients of Great Britain as hordes ; but at the same time I am not forgetful of the precious gifts of diagnosis, and even of treatment, which thus fall to the lot of many of them, as to persons overtaken by acute or vexatious diseases, but who, even if fully aware of the nature of the case, are unable or unprepared to pay for medical aid. Many sufferers are thus consigned to the wards, and on discharge are kept still under supervision ; others are benefited by topical remedies, specific drugs, or elaborate technical methods, such as massage, electricity, x rays, or medicated baths, which in general practice are out of reach. Again, in respect of diagnosis, there are poor patients as well as rich whose maladies are obscure in nature or difficult to manage ; patients who may have made, and be making, payments to a medical man, but are quite unable to add the fees of a consultant or the charges of costly methods of cure. Even in the poorer families of the middle classes serious illness is a grievous or even a crippling expense, especially in these days of elaborate and costly therapeutics, against which some more orderly provision is sadly needed. As things are, these important cases are more or less swamped by the horde.

How, then, is the out-patient to be organised for efficiency, and with respect to the general practitioner, who in these latter days has become far too competent a man to be ignored? Time permits me to consider one part only of the problem. It has been proposed that access to an out-patient department shall be only by the introduction of a medical man in the district. This is too narrow a proposal. To deny a ready relief to the sick and needy who have no doctor, or know none, or in any cases are unable to pay for his intervention—in cases, for instance, of incipient acute disease, of infections, or more insidious maladies—would not be, and ought not to be, tolerated by the public, whether in the name of charity or of civil order. Moreover, the delicate question must arise, how fairly the general practitioner would play the game. As things are, the ill-paid "club doctor" often, and not unnaturally, declines to add to his bounden duties ; nay, the physician who resents a hint at "farther advice," or sniffs at it when obtained, is not quite extinct. Again, what about the time, the trouble, and the comparative ineffectiveness of brief notes or messages ?

The proposal as it stands, then, is narrow and impracticable; yet it touches an important principle, especially as regards cases of difficult diagnosis, those again which need costly methods of cure, and afflicted persons who have paid fees but can pay no longer. To encourage family doctors to refer to the hospital patients of these two classes is then the duty of the managers; and for the cases of difficult diagnosis or treatment I suggest that the need would be met by the appointment at every hospital, and in each department, of an invariable hour when the outside physician and his patient could rely upon a consultation with one or other of the honorary staff in his respective department. These hours should be fairly frequent and invariable; the busy practitioner cannot be counting days and hours, he must be able to say offhand when John or Mary shall meet him at the hospital gates. There he would probably meet others of his brethren on similar errands; and if all could join in each consultation they would derive for themselves as much of interest and experience as of advantage for their patients. Such a system would surely extend itself in many incalculable ways; it would offer a fertile field for the younger consultants, raise the value of medical methods in the eyes of the public, and tend by example to reduce the burden of hangers-on and of routine prescribing among them, and even, perhaps, of vague discontent and quack-hankering among the well-to-do. I will only add that on the medical side provision should be made for consultation in cases of mental disease also.

MEDICINE AND THE STATE.

There is no doubt some discontent in our profession that Medicine has not the rank and consideration which are its due; such as are accorded for example to the Church, the Law, the Navy and Army. Now in so far as any such uneasiness is engendered of petty personal ambitions we need not dwell upon it longer than to recollect that we shall attain to the social consideration we may deserve by the self-respect which ignores the trivial conceits of the day, which is quick to think for others, slow of offence. But this is not all. The physician, if a somewhat touchy person, is not arrogant; the discontent lies deeper and springs from more honourable motives; from a nobler jealousy for our calling, its achievements and services; from a restless sense of great powers not finding their full play and responsibility in the national functions and counsels. Thus regarded, our discontent may be justified, and desire only what is due to the honour and interests of the commonwealth.

Now there must be some reason, if Medicine has failed hitherto to rank with the other great services, why this is so. The answer is not difficult: that in so far as we are concerned only with individual pains, in so far, as some naughty wit has put it, as we are but plumbers and glaziers of the individual body, we have neither place nor claim to public recognition. It is in respect of our concern with the larger issues of public health that our service and responsibilities become of national importance. In this respect, however, until yesterday and to-day we had not the knowledge to justify our vocation. The history of Medicine, broadly speaking, is melancholy reading; it is a record of devastation by pestilence, deplorable blights upon family life, and catalogues of medical formulas and practice as prodigious as the plagues before which priest and physician alike vaunted themselves in vain. Open the pages at hazard, perchance at John Evelyn's story, but a common instance of a common fate. Of Evelyn's nine children a son and a daugher only reached adolescence, and one of these, in the words of Jeremy Taylor, "that pretty person your strangely hopeful boy," was then cut off also; the daughter alone survived him. As in some classes even yet, in all classes then, such disaster was rather the rule than the exception, and the people went upon the facts accordingly: the fighting men, they more or less consciously argued, make us into a nation; the lawyers bring order into our midst; the Church has fostered learning and religion; it is the no less high vocation of medicine before commerce, before other subsidiary ends, to conserve and fortify man's body, the tabernacle of this prowess and this wisdom—the tabernacle, do I say? may in the words of Dr. Caird, St. Paul's dramatic contrast between the flesh and the spirit had but a temporary and rhetorical meaning, like the contrast between matter and energy; the body, spiritually considered, is the immediate organ and instrument of the soul. To maintain this organ and instrument not in the individual man only, but in the social body also, was the vocation of medicine, but science had hardly come to the birth and applied biology had not even been conceived. Medicine could not humbly wait for science, as science was waiting for the experimental method; competent or incompetent, she was forced to the front. Her pontiffs, therefore, strewed before the people chiefly some withered branches of tradition, and the Dead Sea fruit of a curious but mostly grotesque and unregenerate folklore. In the Middle Ages, indeed, great men could not fight for clear causes; they were confronted not only by truths in array one against another, but also by monstrous regiments of error and fiction—regiments to be mown down by the artillery of experiment, as feathered savages before the hail of the machine gun, but till then irresistible. Not till our time and with these arms victorious could Medicine advance; but now it is moving so quickly that, borne on by the moving mass, we do not perceive the speed until we look back to see whence we have come. The belated knowledge is won. To-day we can answer bravely to our invocation. We are commanding the ear of the nations and solving their problems with deeds and revelations so triumphant that in their quandaries, even our unidea-ed governing classes, who had fallen to a belief in "compromise not as politics but as an excuse for routine," and had satisfied themselves of the efficacy of ignorance, are now compelled, bit by bit, to yield us some brusque and clumsy heed, to bully and then to knock under. For from the hands of our leaders the kings of the earth and its merchants have received the keys of Suez and Panama, the gates of the hemispheres; their wardens, the twin ogres of malaria and yellow fever, being by our art if not dead yet toothless and impotent as Pope and Pagan; we have tortured the secret out of the demons of tuberculosis, sleeping sickness, plague, Mediterranean fever, wool-sorters' disease, cerebrospinal meningitis, tetanus, syphilis, puerperal and surgical fevers—need I prolong the list of these modern discoveries, so brilliant as to shine best by their own light?—and where we have not yet extorted the whole secret, as from smallpox, scarlet fever, infantile diarrhœa, hydrophobia, we have so far mastered the tactics against them as to be reducing them to phantoms of their former malignity. Sadly late then as we have come into the field, we are in time to be the saviours of the nations as well as the guardians of the family; and to endow mankind with vast and fertile territories hitherto under the desolation of disease. Yet to be ministers of a newborn profession is not all loss. When Athene sprang full-grown from the head and heart of Zeus, were not the Olympians at first a little disdainful and aloof, and the divine maid a little wondering and shy? And probably the ægis was not quite ready; these artificers are always behindhand. Is not Medicine, born full-grown from the womb of our own time, if a little wistful at first, spared the hamper of a long past? Her gospel is not hidden behind an ancient and creaking machinery, nor are her eyes bent away from the future by a huge inheritance of undigested facts and opinions. The engineer, it is true is a new demi-god, but he deals with far more elementary things; with means, not with ends. Joyfully we are putting on a hundred legs for one in the hope of escaping from ourselves, yet so far it seems very much in vain.

MINISTRY OF HEALTH.

What is now needed in England is no halt by our leaders, but the establishment of a General Staff of Medicine, to rebuke the purblind and inveterate habit in our countrymen of devoting their magnificent energy and their treasure to mopping up effects, in disregard of causes; to teach them better than to hustle each other with fussy, belated hurryings to and fro after evils have surged to a head, as, for instance, in the calamity of plague in India and in the typhoid disaster in South Africa; calamities no longer mysterious, noonday pestilences concerning which the modern physician had ample foreknowledge. Yet with all this knowledge, and infinitely more parcelled out in the several closets of the older ministries, or submitted to the patronage of selfish and awkward local authorities, generally coarse and inconsistent in their methods, and sometimes corrupt, medicine, as a function of the State, is still working as it were with her left hand. Her scattered official members have no unity; working piecemeal everywhere she has no coordination, no integrated self-consciousness. With no fixed apparatus for concerned action, energy is wasted in overlap, in jostling, in divided purposes, and in anomalies. Although her influence has penetrated into almost every function of society and directly and indirectly she is spending a great revenue, yet through the counsels of the nation she passes veiled and irresponsible. The new ideas which are stirring society are largely medical, yet society does not know where, in the back staircases or garrets of the Local Government Board, of the Home Office, of the Education Office, of the Board of Trade, of the Post Office of the Registrar-General's department, of the Lunacy Commission, and so forth, each bee buzzing in its own little cage, medicine is to be found; nor how this new solvent and all-pervading influence are to be brought to the back of revenue or to the bar of public opinion and responsibility.

Our Charge.—Let us consider, but for a moment and in outline, the charge of medicine in normal national functions. Abroad public medicine, which short-sighted people seem even still to see only through the taint and clatter of "hygienic" trade advertisements, public medicine, to which private practice must begin to play a subordinate and tributary part, has stretched out its arm beyond the several nations, is transforming the quarantine of man, animals, and plants, and creating a vast and masterful international service. At home to public medicine is intrusted, in the first quarter of life, the reckoning of births; the protection of infant life and growth; the valuing of each generation by comparison with the past and with normal standards of physiological institution. The new measure of medical school inspection, a far-reaching measure, the full purport of which as yet the country has but little notion, the physical and mental conditions of education, the "half-timer," and night-school problems; in later life the conditions of labour, the dynamics of food and the minimum wage, the how and the why of premature old age, the effects of degrading and stupefying labour, and the time incidence of old-age pensions; factory inspection, with estimates of the effects of particular trades, such as chemical works, mining of all kinds, metal grinding, and so forth with their consequences and pecuniary compensations; and more broadly, the large problems of "eugenics," of housing, of home life, of ventilation, of water-supplies, sewage and rivers pollution, food markets, and the adulteration in England so rampant, and, furthermore, those amenities of life, especially in cities, which by their play upon the receptive organs of the mind, make for the temperance and harmony which are essential to health and function. Such, in the sphere of the normal, are a few glimpses of the functions of modern medicine.

If now we turn from the normal to the abnormal, we may as rapidly note the survey not only of the tides of epidemic diseases in the largest sense of man, animals, and plants, but also of the more chronic but no less mischievous diseases which in a large degree depend upon defect or vitiation of the conditions of social life; the proclivity to reversion and degeneration which is the shadow of evolution; the prevention and treatment of feeble-mindedness and insanity, which after mountainous waste of means is hardly begun; the great problems of hospitals and sick asylums; the urgent problem of a provision for medical and surgical treatment for large classes above the very poor, upon whom long and costly illness falls with a crushing weight and by whom in any case the consummate therapeutical apparatus of hospital charity are unattainable; the working of the Poor-law; the campaign against drunkenness, fornication, and other venomous social vices; and thence to criminology and punishment, to toxicological and expert medical testimony, to the anomalies of coroner's courts which in the crudity of their procedure would seem to exist rather for the destruction than for the corroboration of evidence; and finally, to the antiquated and distrusted dogmas of the judges of the higher courts on responsibility before the law.

Now this is the baldest of sketches, yet does it not indicate that modern medicine is embracing not indeed the final purposes and issues but the springs and conditions of national and universal life and efficiency; yet while the central administration remains as acephalous as the peripheral parts are multifarious and incoordinate, can we wonder that ignorance, confusion, and vacillation still prevail? The medical officer of health is at the mercy of the caprices of any interested clique; his sphere is undefined, he has neither protection nor freedom. In the service there is no order of promotion, no assurance of pension. Thwarted in detail, and in no public cooperation with a consolidated service, he is apt to lose standards, to lose efficiency, and to lose heart. Without an organised State departmet, public medicine lacks the corporate sense of a great official body like the law, and the stability of the coherent social groups which are favoured by natural selection. Moreover, being human, its partial conceptions, cross purposes, and pedantries are thus unmodified; and its naturally strong positions are not fortified against lay criticism; so that the public does not feel at home with medical ideas and practices. Working behind the scenes it loses the discipline and the chastisement, as well as the honour of public responsibility; while in the words of the President of the Royal College of Physicians of London, "the State thrusts upon us responsibilities which are not ours." Unrepresented by a Minister of its own in Parliament, by alien Ministers it is alternately used and betrayed; and in silence must submit to hear its motives misinterpreted, its methods mishandled, and its unrequited labours continually imposed upon.

To one more factor of medical organisation I can but allude, although it lies at the root—I allude to the making of knowledge, knowledge of all national stores the most precious, in spite of the overlords of society who, as I have said, cling still to a belief in the efficacy of ignorance and delay. Grave towards us as are the faults of the Local Government Board, we must gladly admit that in this department some research is fostered. It is clear that there must be administrative laboratories and that without the atmosphere of disinterested research the best laboratories must flag ; still it is open to inquiry how far the State shall make knowledge for itself and how far it shall derive it from universities and other scientific bodies. But when, for science or for art, money is wanted we learn that we are the poorest nation in the civilised world.

What are we to propose, then, in reform of the services of public medicine? It is understood that in high quarters the desire is to begin with the chaotic and inefficient periphery, in the hope that, secondarily, evolution may reach, recreate, and coordinate the subcentres and the main centre. It is urged also that each department must have its own medical bureau for its own continuous guidance and instruction. Again, there is the conventional dread of medicine as of all irresistible knowledge; and a proneness to the sinister device of "*Divide et impera.*" Moreover, the English public has a wholesome dislike to the multiplication of officials; but by organisation the number of officials at any moment would be diminished rather than multiplied. It is true that each department would still need its own standing medical counsel as it has its standing legal counsel; but how far more valuable would such a councellor be when speaking from the consolidated opinion of a corporate and disciplined medical Ministry than as an isolated medical colleague expressing no more than individual opinion. The crying need of reform in the separate peripheral areas must be freely admitted; and Dr. Bushnell is correct in attributing to me an "apprehension of harm in excessive or premature centralisation, lest the central machinery be too powerful for the peripheral equipment." But, on the other hand, without parallel development, coordination, and distinction of central powers, how are local authorities and local medical officers, in all the far-reaching and various departments of national function now being intrusted to them, to derive their instructions and judgment, to command attention, to be supported in their legitimate functions, to be furnished with knowledge, and to be inspired with earnestness and devotion to duty?

CLINICAL PROFESSORS.

In passing now from hospital and public medicine to the school, I would congratulate this University on the recent appointment of responsible professors of medicine. The rich services and the accomplished staffs of the London hospitals fall far short of their potential capacity because in this respect everybody's business is nobody's business. By general report, by the uneven quality of the clinical training of Cambridge students in London, and by personal comparison of the services in great continental hospitals, or, indeed, Edinburgh Infirmary as it was in the days of Begbie and Stewart when I knew it best, and as no doubt it is still to-day, I note in foundations so magnificent as the half dozen chief London hospitals that their defect of responsible clinical professors results in grave short-comings. The apprenticeship system died out and no other methodical system took its place. Admirable are the gifts, devoted are the sacrifices of individual physicians and surgeons, and by such virtues this member of the staff or that gathers for a time a fairly regular class about him; yet he is but an unpaid or ill-paid volunteer, whose personal and private interests must be his chief consideration. None of the senior staff is invested with specific duties or responsibilites. Thus as a whole the teaching is without system, without concentration, without definite standards. At the best it is a procession of brilliant episodes; in the mean it is casual drills under no commanding officer. Where in these great hospitals do we find, as in France and Germany, a clinical professor of experience no less ripe, of repute no less eminent, devoting the best of his golden hours to the hospital; making and controlling his assistants, and guiding his classes in research, working out leisurely his own problems before their eyes? In our visits to great English hospitals do we not see more frequently the great physician or surgeon flitting rapidly from bed to bed, hemmed in by a crowd of foreign admirers, dropping indeed as he goes pearls of wisdom, but educating nobody? His seed thoughts we pick up thankfully, but still we want also the curious, the leisurely, responsible professional teacher, such professors as you fortunately now possess in those eminent physicians Dr. Graham Steell and Dr. George R. Murray.

MEDICAL STUDIES.

Although in my little book on "Professional Education" I have dwelt at some length on medical studies, yet the present occasion and the recent discussion at Sheffield seem to call for some reiteration of opinions for which hitherto I have obtained more attention outside our profession than within it. I hope it is a pardonable conceit on my part to surmise that, had they been noted at Sheffield, the discussion would have moved toward clearer issues and led to more definite conclusions. To-day I can but touch upon the central problem, the evasion of which at Sheffield gave an arbitrary character to what might have been a very important debate—namely, *the relation of university to technical study.* When directly challenged, all competent observers admit that education does partake of these several qualities; and that however commingled in practice however conflicting, the virtue and functions of each must be discriminated, valued, and compared. Moreover, it is generally admitted that as university education, looking as it does to the man and to the future, is apt to be thrust aside for technical equipment which is for immediate gain, the cause of individual development and future knowledge should be the more jealously guarded. Forgive me if under limits of time I put the matter bluntly. A father says, "I can spare neither the time nor the money to give my son a university education, in the proper sense; indeed, I am not sure that I desire it; I do desire to make a special workman of him, and as soon as possible; all beyond this may bring in no more than its own reward. Yet, as many universities have been granting medical degrees on diploma standards, and for training no more than technical, these degrees have become an indispensable business asset; consequently my son must have the stamp, not as a mark of a liberal education, about which I am not now concerning myself, but to testify to good average technical attainments. Specifically I mean that every candidate, competently instructed in the art and mystery of medicine, must be furnished with an M.D. degree." This is the idea now prevailing in our profession and the claim is a serious one; perhaps, in the tangle of these matters, irresistible. At any rate, as things are, it has my sincere sympathy.

There is, however, no inconsiderable part of our profession which goes not quite so far. This party, while still regarding the curriculum as narrowly from the technical point of view, would, however, hold back the university degree for a minority of candidates who have distended their minds with a bigger content; though still of technical staff. With this party I have less sympathy, little or none. If for mere technical instruction the world compels us to give the seal of a university—that seal which ought to attest a disinterested education, aiming chiefly at the making of the man himself—well, we have the recognised excuse of duress. For in the past technical medicine has edged its way into the machinery of the universities as no other technical instruction has done. Save in this anomalous case of medicine, universities have never regarded themselves as engines for the manufacture of professional men as such. The person is made in the seminary and the parish, the lawyer in chambers and court, the soldier in the field, the engineer in the workshop, and so on. To none of these does the university give the seal of practical competency; it testifies to the individual development only. By this anomaly in medicine our conception of a liberal education has been so warped or at any rate so confused, that university degrees on diploma standards may be inevitable. But, I repeat, I can feel no sympathy with the party which, by withholding the degree until as much of this erroneous conception as possible may be accumulated, would give our principles away more completely and force the universities to the manufacture of pedants. For the more intense the specialism the deeper and broader must be the universal foundation. The function of the university is to make the man; and if the man be but half made—I am speaking of course, of the average student, not of the genius who makes himself—the greater burden upon his back serves only to exhibit the slightness of his frame. A technical instruction cannot by mere length and toughness become a liberal education; yet herein the Sheffield discussion reminded me of the old comparison between rheumatism and gout: turn the thumbscrew till the pain is intolerable and you have rheumatism; give it another turn or two and you have gout. So with study: by turning the screw beyond the already exacting pressure of the medical schools we are to carry the technical into a university education. Wince from the truth as we may, a liberal or university education is primarily of different scope, and means a different method and course, not at the end of the curriculum but from the beginning; the professional school however exacting educates the average physician not otherwise than the clerical seminary educates the average clergyman.

But, it may be urged, if we can entrust a university with our technical training, and can set a hospital in the middle of it, shall we not get the best of both worlds? Will not universal methods and scholarly standards mould the technical methods on lines which, if not so as generous as could be wished, may yet be fairly ample? Can we not by levelling down university standards and forcing up technical machinery attain a certain efficacious mean? Now it is a little irksome to me to contest this proposition, for in former addresses, before audiences too much wedded to abstract academic methods and prone to edge away from concrete processes, processes which, no laboratory ingenuity can imitate or even conceive, I have urged that, Antaeus-like, knowledge must continually be recharged by earth contacts. Universities are no longer to be the cloisters of subtle and fastidious persons, observing the wind, and all a little afraid of each other. Albeit this return to the realities of life is not to be for the accommodation of mean positions but for the achievement of still wider knowledge. The mean position, as social history tells us and as biologists are illustrating, is a position not of advance, not of growth, but of retrogression. As Professor E. H. Staring said, we cannot get a quart into a pint pot; but by these measures I would figure, not the potential capacity of the student, but the stricter capacities of our respective methods. Not by any shift can a pint method be dilated into a quart method; the pot may be filled to the pint peg only, if no more can be afforded, but if it is to hold a quart it must be designed on the lines of the quart from the commencement.

There is no escape then from the unpalatable truth that if a liberal education, the education of a university, the making of the man, is to preside over the making of the particular professional man he must pay the price. Be the technical call for time such as it may—five years, say, or six—if the original capacity of the individual is to be brought out, if his personality is to be developed before, and also hand in hand with, his adaptation as a special instrument, some enlargement of time and opportunity has to be given and paid for. Narrow circumstances may deny it to him, they deny us many excellent things; but in this case the average man will never fully find himself, he will be designed as a receptacle and a retailer, and on the lines not of a progressive but of a stationary practitioner.

CONCERT OF METHODS.

Happily, however, with some mutual adjustments, the creative and the instrumental methods may be combined and the double price in time and money reduced. If the function of a university is to be the maker of the man as a whole, it cannot properly be made responsible for his technical efficiency as a practising lawyer, a practising person, a practising physician; as a soldier or an engineer in the field. Nevertheless, theology, law, medicine, military history, engineering, and the like are taught in universities, and herein it is that university ideas and the hard-pressed student and his guardian may approach each other. For to develop the individual faculties, and to create the man, almost any subjects can be used if they are used thus as universals; not as particular equipments, not as furniture, but as disinterested means of unfolding the secret powers of the mind. Yet it is at this very crux that Professor Starling would desert us. If I read him aright he would, while in the university, curtail these convenient studies from educational to instrumental purposes, thus neutralising the very principles on which an accommodation between liberal and technical ideals is practicable. For instance of anatomy, the university, on his suggestion, is no longer to teach anatomy as a means of culture—a disinterested anatomy, to awaken and develop the general faculty of exact observation, and to imbue the mind with broad morphological and genetic principles, but, instead of this disinterested study, sections useful to the future craftsman are to be extracted; neglecting the development of faculty we are to confine ourselves to the inculcation of immediately useful parcels. This is indeed to shape the instrument before we have forged the steel. I have never forgotten the day when Humphry put a bone into my hand and revealed to me as an undeveloped youth what scientific observation meant; it meant not just points for the surgeon, for surgery then formed little or no part of the Cambridge curriculum, but a training of faculty, whether for the physician, the naturalist, the physicist, the palæographer; in a word, for universal education. Thus one realises how carelessly the untrained eye skips its reading; had I been told to note only what I might happen for some practical purpose to want, and to skip the rest, the eye would have fluttered unchastised over many a tiny point, which aferwards, when the mind had been raised to the conception of principles, would have revealed itself as an "expression point," significant of cycles or deviations of growth which otherwise had left no trace. "To look with the eye confounds the wisdom of ages." Moreover, in the unforeseen future, as, for instance in the field of modern neurology, it is the anatomical habit of mind, apart from the memory of details, which in great part gives his lead to the successful observer in new spheres of observation. Such in anatomy is a part of the contrast between universal and technical methods, but such also are the potentialities which enable us to use almost any department of knowledge for an education of universal quality.

Secondly, if time be gained thus, we shall find other gains also at a later stage. The maturer and more various the qualities the mind brings to bear, the more quickly and truly will it judge of what is to come before it later. The teacher's ideas have not to dwindle into the dimensions of a rudimentary disciple. The technical instruction, which it is his turn to give, falls upon a mind already familiar with standards, with principles, with relative values; a mind accustomed to observation, comparison, and foresight. Moreover, among themselves, such educated students do not, as those who are only of the workshop, operate upon each other at low levels, but they stimulate each other with spontaneous inquiry and critical judgment. In this search after truth their minds have found themselves, and this search is the path of life: they have that awakened sense of our ignorance which forbids us any satisfaction in phrases and conventions; which tells us that none of our axioms is true, though truer than an indolent or gregarious assent, and guards us against the domination of the many positive persons who do not know but only assert; such as the historian of whom Actom said that "a little study of the subject would probably diminish the severity of his judgment and add materially to its weight." For students thus educated technical attainment is greatly accelerated.

Thirdly, we may gain time for an enlarged curriculum by requiring more of the secondary schools, and by encouraging our students to come up a little younger. At Cambridge we have decided to offer the First M.B. examination to candidates on entrance, so that with us they may proceed at once to more advanced subjects. In the Sheffield discussion Dr. Dawson Turner was jealous lest thus the literary side should be starved; I find but little of a literary side to starve, but in any case may we not have an equal jealousy of the literary schoolboy starved of science! The elements of science required for our First M.B. are of the kind which should enter into the formation of every educated man.

Much, then, may be done, by preparation by consideration, and by adaptation, to fit together university and technical education; but no consolidation, no contrivance, can make them identical or equivalent. Whatsoever may be the time prescribed by the Medical Council for qualification the student who desires to build up his faculties by a more universal training must add a year or two to the technical minimum, and this from the beginning of his course. It cannot be tacked on at the end of it.

Is it not, then deeply to be regretted that a great Lancashire merchant, a man of energy and powerful in material progress, should use his influence to declare that "a university education retards a young man's progress in commercial life, by occupying years in the study of classical and other subjects when commercial training would be more valuable." Now he must be a very dull or a very complacent observer who supposes our modern industrial civilisation to be hitherto a great success; still what an abasement, surely an unmerited abasement, to suggest of commerce, for which ancient calling this and other universities are now giving new opportunities, that it is all trivial; that it is incapable of principles, of high standards, and has no uses for an education which stores the mind with liberal knowledge and opens it to new and various ideas. We have seen that a disinterested building up of mental faculty is not a matter of this study against that, whether of literature, of social and commercial economy, of physical science, of history and so forth, but of the larger manner of its handling; that university training does not consist in decorative accomplishment, nor in disdain of common things, but in an openness and a flexibility of mind to new issues, in the spirit brought to the study of everything; for although in nature nothing is common, nothing is smaller than another, to the small mind everything is insignificant. Herein the American surpasses the English plutocrat; he sees beyond the counter, he has faith in the best knowledge in every field; we have not this salvation. Let me contrast with such complacency the words of an even more considerable teacher: "You are citizens of the great and mighty city of Athens (a city by the way mightier than any of ours); are you not ashamed of heaping up the greatest amount of money and honour and reputation, and caring so little about wisdom and truth, and the greatest improvement of the soul which you never regard or heed at all?" German commerce is teaching us the bitter lesson that even in his own material field your "practical man" over-reaches himself; that his "good workman" is unable to investigate even practical problems, to appreciate the discoveries of others, or to teach his apprentices. If he is to transform human energies into the best material results the practical man must have the best kinds of minds at his service; not merely the handy man, sharp and resourceful in common emergencies, but of no insight and no horizons.

PORTAL OF QUALIFICATION.

If then a university degree is to be exacted for utilitarian teaching which, as it is to occupy only the time officially prescribed for a diploma, cannot attain to university standards, we shall lose sight of the first principles of all education and barter away the foundation of medicine herself and of all progressive knowledge. It has been, however, as I have said, a part of the anomaly of university medicine that for this profession universities have been endowed, or shall I say "saddled," with the duty and responsibility of qualification for practice: a concern which, as we have seen, is none of theirs, or is theirs only in common with society at large. By the establishment of one portal to the Register the State will, I trust, soon relieve us of this alien burden and of the duty of tests no less alien to our best purposes. At Cambridge indeed, I consider that to impose upon those of our M.B.-B.C. candidates, who are already on the Register, as are some 75 per cent. of them, a repetition of these diploma tests, is not only otiose but grave evil; it prolongs what Professor Starling well calls the "stuffing" period, the period during which the candidate denies himself the wards that he may sit in his lodgings with a teapot, and a wet towel about his brow, fagging up handbooks. The contents of these, in dilute solutions or on sheets divided into opposite columns of neatly docketed cram, he details to us over again at Cambridge. Now many of these candidates, as later we find by their M.B. theses, we really had led to think for themselves; yet in a qualifying examination they dared not venture to betray it. Occasionally an audacious spirit may enter a timid demur to current doctrine or phrase, and if so, from me at any rate, he obtains a good mark, whether his demur be justifiable or not. But, if I exclude the few riper students who give more time to the university, I can hardly recollect a paper in medicine in which a candidate broke away from conventional notions and sheepish assent. Man by man and year by year, their papers are as conventional and as flat as willow-pattern plates.

TESTS OF METHODS.

But it may be urged, are not these remonstrances rather fanciful, rather academic, counsels too rare for a common world! Well, we will try, as the children say, to prove our sum. We must go beyond these tests of current doctrine and common formulas, of the capacity of swallow and regurgitation by which our examination candidates regularly amaze us. We shall seek a test not of the volume but of the design of the candidate's work of the power and quality of the human organ we profess to have built; of the personal character informing his notions. We shall mark whether his argument signifies that his ideas were spun in his own loom, or are all warehouse goods; and if in the accuracy and lucidity of his language he betrays a precision and balance of thought. We shall note as highly significant such fresh observations and ideas as offer themselves on all sides to the developed intelligence, the quickened eye, and the arm which has learned to know the quarry and handle to pick.

Whether the qualities of the university graduate are as remarkable as they should be in current medical writing it might be ungracious at present to inquire; and I must not assume the truth of the recent complaints that English Bachelors of Science, when they visit Germany are found to be trained so much on books and laboratory clerking, and so little on personal initiative, that their education has to be recommenced on better lines; I must then confine myself to one, but this a definite, test. At Cambridge, before an M.B. candidate can receive his degree, he must prove to us that, however well "stuffed" a pupil, he is able also to show that he is not a mere mouth-piece, but in some reasonable measure has developed and realised his own personality. Before he is admitted to graduation he must show us not only how much he can repeat, but hidden under the pile of his tasks and cram he must also discover himself. Plaintively as at first he may protest that he has nothing "original" about him, he has none the less to set to work on some piece of research—when to his surprise and pleasure he usually finds out that we had made a thinking and even a creative being of him after all, and on this discovery he goes into practice a different man. But this research work for the M.B. is unfortunately the boon only of Cambridge men. I have therefore to seek my test in the M.D. exercises, where, if at all, lies the test of personal construction as contrasted with borrowed furniture. The M.D. candidate is too old for examination and he should be too good for a test so coarse. Therefore, every university, perhaps all universities, began by making the M.D. dissertation the chief test of its peculiar influence, of its formative discipline, of its power of developing the mind as compared with mere schooling. Yet what are we witnessing to-day? That even this one test, the one test of the quality of the university itself, as well as of its progeny, is being quietly evaded. On inquiry I find that now of the M.D.'s of the London University scarcely more than 10 per cent. give evidence of this or any such developed and ripened faculty; and it is whispered to me that on this same path even Victoria is a backslider. Yet is not this not only to relinquish all interest in the higher qualities of our students, but also tacitly to shrink from the whole-some test whether a university has justified itself as such, or, under whatever duress, is allowing itself to be dragged down to the place of a mere technical school; This can but mean stationary puplis, and stationary pupils make stationary teachers; if a university is to become an organ of life and discovery it must begin and end by making research compulsory all round. Research must as surely be implied in the earliest stages of the teaching, as actively developed and testified in the later.

REASON, IMAGINATION, AND LIFE.

And now, in conclusion, may I turn myself for a moment to the young men entering into or crossing the threshold of medicine. You have heard me insisting upon the power of knowledge, you have heard me resenting that worst part of ignorance, the conceit of knowing what we do not know, and the inveterate habit of calling opinions "facts;" you have heard me lamenting the English fatuity of disregading causes to throw all our energies into mopping up their consequences; and you may begin to accuse me of the creed of the Jew of Malta, "I count religion but a childish toy, and hold there is no sin but ignorance." Far indeed from me be any such counsel! I agree that a man's overbeliefs are the most interesting thing about him. I bear in mind Carlyle's judgment on one who "had a great deal of unwise intellect." I see that the lower the idea the easier it is to formulate it; so that in our satisfaction with the solidity of our foundations we are prone to forget the superstructure for which ethical and imaginative insight must also be enlarged and illuminated. For if in logic we distinguish these endowments, if indeed in practice some may be nursed to the starvation of others, yet in the fulness of life they make each other, interpenetrate each other, and are bonded together. If then, limited by our prejudices or wearied by the quarrels of sects, we divide them in the mimic life of education, if we constrain our schools and universities to force intellect to the impoverishment of ethical and imaginative faculties, or even to nurse them in separate compartments, evil rather than good will ensue.

> "My brain I'll prove the female to my soul,
> My soul the father."

In the everyday world we observe, even in persons of moderate parts, that character, consisting in a high idea of duty, in an intuitive perception of the essential and a sense of relative values, a generous sympathy with various human experience, may ripen into a kind of intellectual power. And if we ask how this may be the answer is not very remote. The zone of our intensest life is not in the individual alone, nor again in the universe alone, but in the weaving edge between them. The tissue, as on the personal side it is wrought, we have to guard from decay; but the weavers' vision and hand, by an intuitive gift of insight and touch beyond common reckoning, are swiftly conceiving the pattern and designing the web. As Professor James says, "ideal impulses possess us in a most unaccountable way, and work gets done." Thus after his fashion every man of action, even the man of science, is an artist; it is by imaginative vision that he gives birth to the new ideas, which he then compares and approves by intellectual judgment. We know in part and we prophesy in part. This zone or phantom verge of intensest vital activity, this halo of creative life between the individual and his *milieu*, in ethics is faith and hope; in work is purpose and enthusiasm; in art is creation; in science is that spirit of research which is confined to no laboratory but sees in every patient a new problem for interpretation and succour.

Your beliefs then are integral constituents of your lives, and are your driving power. For with duty or values, or even with ends, the equal eye of science has no concern. And if any one of you thinks he has no belief he lies in grievous error. Consciously or not, each one of you is harbouring his own ideal of life, good or bad, and is living by it; if the moth gets into it your character will decay with it, and so will your influence on others. Mark then, day by day, the order of your springs of action, that your hearts may be lifted up, and the continuity between will and action quickened and knit together. We have seen that to progress we must be living above the mean position; and as modern philosophy postulates that our several worlds are not outside us but within us, and are what we are, we realise that the world is what we make it; and that our maturer responsibilities cannot be ordered by any external authority. In the words of an accomplished author, Miss Mary Cholmondeley (I forget in which of her interesting stories): "How many rush hither and thither, and wear down the patience of earnest counsellers, and all the best years of their own lives in fretting and scratching among ruins for by law by which they may live! They look for it in books, in the minds of friends, in the face of Nature who betrays in her eyes the knowledge of the secret but utters it not. And last of all a remnant of the many look into their own hearts, where the great law of life has been hidden from the beginning."

For the pattern and governance of your daily lives I am thankful to say that in our own profession you will find a true and helpful example.

Conversant during a long life with the homes of medical men I have felt rebuked again and again by their devotion to duty, their peerless generosity, their self-respect, and simplicity of manners. Faultless we are not, as more than once I have dared to say. Besides the temptations common to all men we have temptations peculiar to ourselves. Our patients, loyal and grateful as most of them are, disappoint us at times, and these disappointments may be very galling. In these days of rather aimless unrest they are too apt to forget the importance of continuity of observation and treatment. The consultant gives counsel indeed, but upon the family physician, who knows the whole story and sees the daily strains, depend the patience, the vigillance, and the discrimination needed to compass the cure. Yet too often, and perhaps by a tea-table cabal at a critical time, the patient is whisked off to some "specialist" who has an Installation, an Institution, a Home, or a Spa, which has to be kept agoing—*recte si possit!* And to the patient life is very dear; his judgment is enfeebled by illness and care; he clutches at any fair promise of aid; and the physician must remember that he also is human and that when ill himself he is apt to run hither and thither quite as inconstantly.

And are we not more to blame when our imaginations, kindly for others, stop a little short of our own brethren; when we are not quick to put ourselves in the place of him whom we are unhappily wont to designate not by the word of brother, but of "opponent"? Now words sink into our minds like stones. The relations of medical men in small societies are delicate, and with the best intentions misunderstandings are apt to arise, and to be aggravated by busybodies. If, indeed, our medical neighbour be not very fraternal, not always perhaps very high-minded, we must remember that herein lies one of our special temptations; and, if only for our own happiness and peace of mind, we must be a little blind to his faults and endeavour by our conduct to bring out not the worse but the better part of him. There is more awkwardness in these matters than malevolence, and there is nothing high-minded in being quick to take offence.

You may be tempted to say that it is all very well for me at my time of life thus to posé as your philosopher, and to set before you intellectual and moral ideals which you cannot hope in this rough and tumble world to attain. But to hitch our wagons to a star is not to reckon on camping in it at nightfall. An ancient sage has told us: "In magnis et voluisse sat est"; a modern poet puts it; "It is not what I was but what I aspired to be which comforts me"; or, as we say in our strong northern vernacular: "He did his best, and he couldn't do nowt else."—The *Lancet*, October 10, 1908.

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INTERNAL OR HOMEOPATHIC VACCINATION: THE VICTORY IN IOWA.

By John H. Clarke, M.D.

For the opening of the present session of the Cooper Club I have chosen a subject of very great importance to the community in general, and to the homeopathic cause in particular. The chief part of my task to-night is to make known to you what has already been done, and I shall read to you the account given by the late Dr. C. W. Eaton of the fight waged and won by him and the colleges in Iowa to place homeopathic or internal vaccination on the same footing with inoculated vaccination in the laws of the state.

Internal Vaccination a Great Asset for Homeopathy.

This matter is of extreme importance to ourselves. If homeopaths would only make the most of homeopathy we should not long have to wail about the want of "rights" and "privileges." During the small-pox epidemic of five or six years ago some hundreds of cases passed through my hands of persons who wished to be protected against infection without being "vacciuated" in the ordinary way. They were all "vaccinated" internally by me with one or other of the cognate nosodes—*Vaccininum, Variolinum,* or *Malandrinum.* Many of those who were treated in this way developed symptoms—

gastric disturbances and malaise being the most frequent, and in some instances eruptions of pustules—but none were materially inconvenienced, and none of those so treated took small-pox infection.

In these times, when there is such a strong and growing objection to ordinary vaccination on the one hand, whilst on the other hand the dread of small-pox remains, the homeopathic method of protection is the only solution of the difficulty. It seems to me that if we were to preach this doctrine throughout the land, and practise the internal method, we should reap a rich harvest of converts to homeopathy and spread a knowledge of our principles in a way that is hardly possible by any other single example of our art.

WEAK POINT IN THE ANTI-VACCINATIONISTS' POSITION.

The anti-vaccinationists are deserving of the very highest credit for the work they have done in securing individual liberty. But the weak point of their position is that it is based on a negative. They maintain that vaccination does *not* protect from small-pox. Therein I think they are wrong. They also maintain that vaccination, as it is ordinarily performed, *does* injure the person vaccinated. Therein I have not the slightest doubt they are right.

Homeopathy is in a position which is completely unassailable. It says that it can protect a person against small-pox infection by homeopathic means without poisoning that person's blood.

The allopaths themselves are playing into our hands in this matter with the serums and vaccines which they are now administering by the mouth or by the rectum. If we allow them to carry off the credit of any success they may obtain, it is our own fault.

THE DAMNING FACT IN ORDINARY VACCINATION.

There is one circumstance in connection with ordinary vaccination which should suffice to condemn it without appeal—and which will so condemn it one day—a circumstance which distinguishes it from almost all other analogous treatment. In ordinary vaccination a ***living morbid organism*** is introduced into the blood and tissues of the vaccinated person. That is to say, it is introduced into the person's system in such a way that there is no power of resisting or rejecting it. In the tubercular treatment the "turberculin," or other preparation injected, contain no living organism, and are therefore in quite a different category from that to which vaccine belongs. Homeopathy, by its method of attenuating poisons into high infinitesimals, gets rid entirely of all living organisms whilst retaining the curative and prophylactic efficiency of the virus. By this means homeopathy has brought into its materia medica the deadliest serpent venoms and the viruses of the deadliest diseases. By this means homeopathy has robbed vaccination of its terrors and has taught its followers how to protect themselves from small-pox without poisoning their blood with the virus of a chronic disease such as vaccinia is.

The paper by Dr. Eaton, from which I will now read to you some salient passages, is as fascinating as a romance, and withal soundly practical. Dr. Burford will remember as vividly as I do Dr. Eaton's address in Atlantic City in 1906 on another subject—the appeal for men and women to join the ranks of the homeopathic profession. This appeal has now taken form as a regular propaganda in the United States. The loss of such a man to our cause is grievous indeed, but his work is not lost, and in his absence it is all the more incumbent on us to make the most of what he has done.

I will now quote from Dr. Eaton's paper, to which I have only added a few cross-headings and a few notes.

THE "NEW VACCINATION" IN THE COURTS OF IOWA.

By Dr. Charles W. Eaton, Des Moines.

You will, of course, bear in mind that I stand here to-night not as an anti-vaccinationist, but simply as an advocate of *homeopathic vaccination.* We are advocates of the better way.

Away back in surgery there was a day when all hemorrhages from amputation, excision, &c., were controlled by the application of a hot iron and its resulting cautery. To-day we who use the ligature are not opponents of surgery. We are simply the practitioners of improved surgery.

In precisely the same sense I stand before you, well knowing that you and my Iowa colleagues are not opponents of vaccination, but are advocates and users of the proper vaccination.

THE FIGHT IN IOWA.

The legal fight in Iowa for our proper recognition was entirely successful, and it falls to my lot to-night to tell you as accurately and briefly as I may just what happened. First was our small-pox epidemic of five years ago. Up to that time, outside of the great centres, I doubt if 5 per cent. of all physicians had ever seen a case of small-pox; but then we all met it.

A goodly number of the homeopathic physicians in Iowa and and in Des Moines were using the *Variolinum* vaccination—the internal method. On February 14, 1902, the City Council of Des Moines (for Des Moines was the first of three court cases in Iowa), sitting as a Board of Health at the instance of our allopathic city physician, who was there prompting them, adopted a resolution requiring that vaccination should be by "inoculation."

The city physician and the school board were in close accord, and all principals of schools were instructed to admit no child who had not been vaccinated by scarification on the arm in the old way. A certain Doty Evans took her certificate to school and was sent home. On the 17th of February Mr. Evans accompanied his daughter to school and presented her to the teacher and principal of the school, and had with him a certificate of vaccination showing that his daughter had been successfully vaccinated within the past two years as required and this was her certificate : "January 31st, 1902. I hereby certify that I successfully vaccinated Doty Evans, of 1175, 11th Street, Des Moines, Iowa.—C. W. EATON."

The principal of the school and the teacher refused to permit her attendance at school; refused to recognise the certificate, claiming to do so under the instruction of the school board, which was the fact.

Mr. Evans, being an attorney, at once filed a petition for temporary injunction in our district court, directed to the school boards against its individual member and by name, the superintendent, the principal of that particular school, and the teacher of that particular room.

Des Moines was on that day a very inspiring battle-ground for homeopathy. All of you who have ever been in the court room of a district court know the forlorn fringe of atoms that usually occupy the benches—poor, broken-down old men who look as if they had been picked up from the most desperately dissipated and poverty-stricken regions of the city. On that morning the court room was crowded with the best parents of Des Moines, and gathered within the region of the bar was the city solicitor, of course; but the school board took an active part and had its attorney there; pronounced friends of the allopaths were there as well as those of the homeopaths. One of them, who was a professor in the medical department of Drake University, had wired to the Surgeon-General at Washington to get ammunition to use against us, and had his reply in his pocket. Things were at the highest degree of tension. But now mark. The pivotal point was one entirely unexpected. Our attorneys had based their demand for injunction on the fact that homeopathy is one of the established and recognised schools in Iowa and therefore its practice could not be prohibited, and no Board of Health had power to prohibit the practice of any method of the homeopathic school. It was by law an established school of medical practice and its graduates recognised and licensed by the State.

"INOCULATION."

The resolution passed by the Board of Health specified that the vaccination must be by inoculation. Of course, that inimical city physician should have made it "scarification," but he did not. The moment that we got into court the question came up as to what was "inoculation." The judge said, "If those certificates are by inoculation no power on earth can keep the children out of school." That started an immediate run for a medical dictionary, which said that "inoculation was the introduction of a virus into the system"—but did not specify the method. Now, what happened? The opposition said, "We withdraw our opposition." They saw immediately that they were beaten and they wanted as little on the court record as possible. The whole case evaporated right there.

To show how alert they are and how quick they take the alarm, let me say this: When it became apparent how the case was going one of our attorneys wrote out a certificate that would bring it squarely to the question of scarification. We did not want this decision by default. He handed that certificate to me and said, "Get that rejected right away." I jumped into my buggy, drove to a school which was within a half block of where two children lived who were being kept out of school. I put the certificates into their hands and started them to school, and although I left the court house before the case was concluded those children could not get to the school quickly enough. When I got there the teacher met them with a welcome. "We are glad to see you. We have just had a telephone." In fact, that same day the superintendent of schools of Des Moines telephoned to one of the principals that he was to accept all certificates "by the external, the internal or the infernal method."

Naturally, we wanted a case that did not go by default on a mere definition. We wanted a case that would be specifically on scarification.

"SCARIFICATION" NOT NECESSARY.

There was a school board in an independent school district partly within and partly without the city limits, whose president had been instructed by the city physician that inoculation meant scarification. So some of the scholars of that school were vaccinated by the "internal" method and their certificates presented to the president of this outlying board. He gave a written refusal to accept them because it was not specifically scarification (that may sound obliging, but he was one of my best friends and patients). That enabled us to bring the issue squarely in the court, which he did. The injunction was granted in both cases, and after a considerable time a final decree entered and the costs taxed to our opponents. The process was by injunction and the scarification question fairly raised and the decision made in our favour in both cases.

CASE NO. 2, AT IOWA FALLS.

The next case was at Iowa Falls. For two years after this decision we ran along without molestation and began to take it for granted that the other side knew when they had enough. But they forgot at the end of a couple of years, or else they had not heard the news in Iowa Falls. An allopathic doctor happened to be chairman of the school board there—a bad combination.

On November 7, 1904, Roy Marks was excluded on the same ground that the child was excluded in Des Moines. The same day the father filed his petition for injunction against the board and against its individual members. The school board and its members individually filed answer, insisting upon scarification.

November 12th, the judge entered an order for temporary injunction.

On the 13th of March following the case was called for final hearing to make the temporary injunction permanent. The school board of Iowa Falls did not appear at all and the court entered the permanent injunction and the costs were taxed to the school board.

CASE NO. 3, AT COUNCIL BLUFFS.

Case 3 was at Council Bluffs and this was not originally our scrap, but we were drawn into it. In the spring of 1905 the trouble at Council Bluffs began between the City Board of Health and the school board. The mayor of Council Bluffs at that time was the most aggessive and the most successful allopathic physician of the city. Now, by the Iowa law, the mayor is, by virtue of his office, president of the school board. Mayor McCrae and his board issued an order that every teacher, pupil, and janitor of the Council Bluffs schools should be vaccinated. The school board did not think that was necessary and did not want it done, and so they fought the Board of Health. That was not our fight at all.

After it was determined that under the law the Board of Health had the power to order the vaccination then it came up that Council Bluffs homeopaths were using the internal method. This the City Board of Health refused to recognise. Popular interest was at a white heat. The last few weeks of that school year the schools were practically disrupted. The pupils were out by hundreds. People would not have them scarified and no other certificates were accepted. With the coming of fall, at the opening of the school year, the conditions which were supposed to have made vaccination necessary disappeared. But both parties concerned were desirous to settle the thing in court so that in the event of any future emergency arising there would be no further question as to the procedure. All parties agreed to make the case on broad issues so that it should not be decided on some narrow technicality, as the Des Moines first case, when they threw up their hands on the word "inoculation." It was a distinguished trial. I do not know that I dare say much about it, for your president this evening was one of the witnesses at the trial.

It so occurred that the Missouri Valley Institute of Homeopathy was in session at Omaha, and that gave not only the opportunity to call the physicians of Omaha and Council Bluffs, but also those in attendance at the meeting. Dr. H. C. Allen, Dean of Hering College, Dr. George Royal, Dean of the State University of Iowa, the late Dr. A. P. Bowen, of Sious City, were all on the witness stand, and there was also a deposition read from Dr. W. A. Dewey, of the Michigan State University. The result was an honourable vindication of our rights.

In all three of these decisions, the two Desmoines, Iowa Falls and Council Bluffs, when the cases came to trial, the contest inevitably narrowed down to just this proposition: 'That Boards of Health have not the power to specify and enforce any method to the exclusion of any other method practised by a school of medicine which is authorised and established under the laws of the state. It is probable that we will have no more cases, because the allopathic physicians realise that with three existing decisions against them in three widely separated courts, it is scarcely within the range of possibility to secure a reversal of these decisions and secure a decision to themselves.

THE CASE OF EMPLOYERS OF LABOUR.

The immediate result of these decisions was that the patrons of homeopathy were free to have their children vaccinated by the internal method. But certain collateral results were bound to appear. For instance, the Boards of Health served notice on the large employers, business houses and manufacturers, that they must have all their employees vaccinated on certain dates or else they would be closed up. This was a phase involving large financial interests. In the case of two of these large concerns I vaccinated their employees by the internal method under the agreement that if the cases that were then pending went against us. I would immediately vaccinate their force by scarification without additional charge. No matter how ardent a homeopath an employer may be, he cannot run any risk of the wheels of this factory being stopped or the doors of his stores being closed by the Board of Health. Thus, our legal status protected not only the children in the school, but also the men and women of the business world. Furthermore, it has been able to protect numbers of families who have removed from Iowa to other states, because our certificates have been accepted in many instances by school authorities of other towns of other states in cases of such removal.

QUARANTINE.

Again, our legal status is also adequate for the protection of those who have been exposed to small-pox and whose release from the resulting quarantine—that is, of exposure—is conditioned upon their being vaccinated. None of us would think of these things in advance, but these conditions appeared in

Iowa, and you can expect them logically and as a matter of course. This found an amusing illustration in Des Moines.

Small-pox having appeared in a family, and the patient having been taken to a hospital, it was required of the remainder of the family that they be vaccinated before quarantine be released. The head of the house presented a certificate by the internal method to the city physician, a rabid allopath, who literally "fired" it. Our attorney then called upon the mayor, who sent our attorney to the city physician. The city physician greeted him with scant courtesy, refusing curtly to pay any attention. The mayor consulted the city solicitor, who advised him that there was no escape from releasing the family from quarantine. Then the mayor sent word by our attorney to the city physician to release the quarantine, whereupon, when the mayor sent this message, the city physician replied: "Tell the mayor to go to——!" Our attorney delivered the message to the mayor, who fairly jumped to the telephone, called up the doctor, told him to release that quarantine forthwith, and the quarantine was off of the house within an hour.

Now, you see, all that would have been imposlible but for the decisions behind it.

A "DEFINITION" MOVE.

Another factor in the Iowa contest was the attempt on the part of the allopathic physicians to checkmate us by having the State Board of Health adopt a definition of vaccination specifying the scarification as sure and positive. A resolution including such a definition the allopathic members of the Iowa State Board expected to carry, as they have four members, the homeopaths two, and the electics one. In pursuance of these tactics, the Secretary of the Board, who was thoroughly in opposition to us, went to the National Conference of State and Provisional Boards of Health that was held at Hartford, Connecticut. He was on the floor once during that meeting, and that was for the purpose of telling the story of his Iowa tribulations from internal vaccination; he asked the committee to formulate a definition of vaccination, which request was complied with.

He came home, and that definition was introduced at a meeting of the board for passage. It was practically defeated in the morning meeting. They adjourned for lunch, and those of you who have been practical workers in these things know what terrible things can lie concealed in an adjournment. The Board of Health of Iowa included in its members a veterinarian and a civil engineer—very properly! Evidently during the lunch hour these gentlemen were laboured with, so that at the afternoon session that definition was perpetrated upon the Iowa profession by a gain of their votes. So that we have in Iowa a definition of vaccination with all the authority behind it of a "horse doctor" and a civil engineer, but it is official nevertheless.

A Bill was then introduced into the legislature effecting a definition of vaccination. The legislature shied so that it did not get outside of the committee. Last year the State Board of Health undertook the revision of its regulations from A to Z, and among other things they encountered the above definition. Under the suggestion of our members to the board that some evidence had occurred that there were three decisions in the state which flatly contradicted their definition, and that it could not stand, they passed it over, and the Iowa State Board of Health does not promulgate any official definition of vaccination, and in fact has none.

"SUCCESSFUL" VACCINATION.

[We have now come to a most important part of Dr. Eaton's paper—the part which deals with the practical technique of homeopathic vaccination. For certificate purposes this must be superintended by a medical man. It is highly important to observe how Dr. Eaton and his colleagues met the requirements of the case.]

The local Board of Health rule demanded that the certificate should show two things: That the vaccination has been by inoculation and that it has been successful.

Now as to the word "successful." I suppose a vaccination may be "successful" if there is a visible scab. But we have no scab to show for our "successful," therefore what do we mean by it? Simply this: In a majority of cases under treatment by *Variolinum,* the patients will show a distinct reaction, such as fever, active gastric and intestinal disturbances, &c. Now, then, if the preparation you use has in any one produced those symptoms it shows that preparation to be active, and if you give an active preparation there is no doubt that it will impress the organism.

A demonstrated preparation that can produce distinct disturbances is sure to be "successful" to whomsoever administered because what is administered by way of the stomach always gains contact with the system. We never give a dose of *Prussic Acid* with the idea that it will not "take." We all "take" in such cases.

One of my colleagues thinks that the certificate should read "inoculation per os." He also insists upon himself giving the first dose. I also use a dose night and morning or until reaction occurs or for two weeks, for in the absence of any objectional reaction it is well to make it thorough.

As my colleague said, it is well to administer the first dose yourself, because some people will get the *Variolinum* from a physician, and also the certificate and never take the medicine because they are opposed to that sort of thing.

During the height of the small-pox epidemic a lady went to a reputable and one of the well-known allopathic physicians of our city to be vaccinated. She asked, "How much will it be?" and the physician replied "One dollar." "But," she said, "I want you to rub water on instead of vaccine poison. I don't want it to take." "Oh, well, that will be two dollars and a half," answered the physician. I speak of this to call pointed attention to the fact that any dishonesty such as I have mentioned is equally applicable to vaccination by scarification.

In Iowa doctors have quite generally used the 30th potency for vaccination. I say this in anticipation of a question that may be in your minds.

I may have wearied you by being on the floor so long, yet it is hardly possible to give a clear and definite account of just what happened in the courts of Iowa in less time. As had been previously remarked, the unbroken chain of decisions in our favour will probably preclude any further appeal to the courts. Now and then there might be some trouble in some outlying locality among those who are contumacious, but so soon as they are advised of what has transpired, they will accept our vaccination without more ado.

The homeopaths of Iowa are proud of their Iowa courts who have said to the hosts of allopathy, " You shall not deny the people everything that has not been approved by your own ignorance and your own prejudice. You shall not filch from little children their priceless heritage of healthy and untainted bodies."

—There is a little that need be added to this notable paper. Its lesson is writ so large that none can mistake it. I think it is not possible to better Dr. Eaton's suggestion of giving a 30th potency of *Variolinum* and a dose night and morning for a fortnight, or until evident reaction has occurred for efficient protection. In using *Variolinum* we avoid all the perplexing questions which centre around vaccine.

Vaccinia, as Dr. Mathews Duncan used to say, is the nearest analogue to syphilis in its clinical aspects. It is a chronic disease with primary, secondary, and tertiary symptoms. The cant about "Pure Lymph" is pure nonsense. It would be just as sensible to talk about pure syphilitic lymph. The only excuse for vaccination at all was that it was less dangerous than inoculated small-pox, Inoculation with small-pox virus is a practice of grear antiquity in the East. But homeopathic vaccination ot variolation sweeps away the perils of both practices. It affords ample protection from small-pox and avoids all risks.

EDITOR'S NOTES.

Etiology of Beri-Beri.

Dr. C. N. Saldanha writes in the *British Medical Journal* November 28, 1908,

"Rice, as harvested and with the husk still on, is called "paddy"; rice exhibits more varieties than any other known grain, and incidentally is subject to many ailments. Among them is a fungoid disease, which causes beri-beri in man, the active principle of which I have called "arsin."

In the process of curing rice, arsin undergoes fermentative changes, and is rendered inert and innocuous. If, out of a stack of diseased and arsin-containing paddy, one-half be prepared as rice for the market by the "cured" process and the other half be converted into "uncured rice" by machinery, the cured rice will be comparatively safe, whereas the uncured will contain active arsin, mostly in the rice dust, which is simply fine bran not removed by winnowing, but bagged with the rice for the market.

Uncured rice has a more pearly and otherwise more attractive appearance than the cured; the custom is to pass the rice direct into the cooking pot as bought from the shop, dust and all. The poorer classes among the Chinese consume not only the rice but also the water in which it is boiled, which would contain most of the dissolved arsin. Hence beri-beri is generally prevalent among the poor Chinese, Malay, and other Mongolian races, who habitually use uncured rice. And at each meal they take unwittingly a small dose of arsin when their rice supply comes from mildewed paddy.

In some cases it causes diarrhoea, and the poison is probably thereby eliminated. The natives ascribe the diarrhoea to eating new rice. Generally toleration soon becomes established, and when the use of diseased uncured rice is persisted in, beri-beri results.

Arsin-containing rice emits an alliaceous odour when boiling. The fumes inhaled cause a pleasant sensation of fullness and exhilaration, somewhat resembling the effects of minute doses of alcohol. Arsin is a cumulative poison. In its initial action it is a cardiac sedative. In sows fed on the bran of the diseased rice oestruation is retarded, and they generally become unfertile. The bran and the rice dust consist of the desiccated reddish-brown inner capsule of the white rice seed, and it is this capsule that is primarily affected by the beri-beri fungus.

Beri-beri is said to stick to certain ships and localities. The truth is that once diseased rice gets into a bin the rice dust sticks there, and infects subsequent stocks of rice coming from clean sources.

Beri-beri is neither contagious nor infectious any more than is alcoholic or arsenical paralysis, with both of which it has certain points of resemblance.

The neuritis in beri-beri is quite secondary, and very often in its earlier stages is of a transient character. The constant factor in the disease is vasomotor paralysis of terminal branches with tendency to chronic congestions of organs, in which they ramify.

I have already alluded to diarrhoea as an initial symptom, and occasionally, though rarely, the brunt of the malady in the last stages of the disease also seems to fall upon the alimentary tract. There are frequent discharges from the bowels, which soon become free of all faeculent matter, and then the discharged fluid, sometimes a pint or more at a time, looks just like water in which beetroot has been boiled. This may be called the haemorrhagic form of beri-beri, and is the most fatal.

The mortality-rate in beri-beri cases cannot be easily ascertained, as in any epidemic some are fresh cases, others are relapses—it may be the first, second, third, or fourth. Relapse is the role in the disease. If the first attack does not kill, subsequent attacks will do so. There is no cure for beri-beri, though treatment may cure an attack as it does a bout of gout.

Among dietetic measures, pineapple juice seems to be of use. Tea and stimulants seem to mask the effects of arsin, and when systematically witheld from a staple diet of uncured rice, an epidemic of beri-beri is the usual result. Depressing circumstances favour the onset of the disease, so it has come to be considered as a disease of the coolie poor, just as scurvy was in the sweating days of old ships.

When for any reason uncured rice has to be used as a staple article of diet—Chinese always prefer the uncured to the cured rice, as the former has a more pearly appearance and makes a better show when cooked—wash the rice in cold water till the water ceases to be cloudy before putting it into the pot to boil, and skim while boiling.

These two procedures will remove most of the rice dust always to be found bagged with market rice.

The water in which the rice has been boiled must not be consumed as it would hold in solution some of the arsin in the rice as bought from the shop. As the cookery books say, in properly cooked rice each grain must be separate.

Insanity, Wit, and Humour.

In an address delivered at the opening of the Medical Graduates' College and Polyclinic Dr. Robert Jones took for his subject "Insanity, Wit, and Humour." Dr. Jones pointed out that insanity in its manifestations often furnishes food for humour and even laughter. Conduct is often so incongruous and the association of ideas so rapid that mirth and humour are inevitably suggested. Many persons are more witty, and indeed altogether more interesting, during an attack of mania than at other times. The insane are, however, slow to appreciate the wit of others, and the nature of insanity, which is essentially selfish, tends to accrete all attributes to itself and essentially selfish, tends to accrete all attributes to itself and forbids the enjoyments of humour in others. The mind is too self-centred and lacks that power of detachment which would enable it to sympathise with the situations of others. The subacute maniac may temporarily have a more rapid and fertile capacity for brilliant repartee, being ungoverned by the conventions or the inhibitions of the sane mind. He may have a more fluent range of ideas and may even produce better work in prose and poetry in his state of exaltation than at any other period, but the reaction which sets in later shows the ravages made upon his mental faculties. Only in cases of delusional insanity is there ability, originality, or constructive power, and even in these cases the mental powers are on the wane. Insanity implies degeneration, and the extravagant images produced by it are not cretions of the wit, for the conceits and witticisms attributed to insanity are on a lower plane than these in healthy mental action. They are strident eccentricities and not stroke of genius. Dr. Jones concludes that wit and humour do not arise spontaneously in cases of insanity; that their creation and origin are occasional and rare; that the power to apprehend wit is imperfect in the insane, although humour may be more frequently appreciated; and that the humorous stituations apparent in the delusions and conduct of the insane are incongruities realiesed by other but not always shared by the insane themselves. *The Lancet,* November 7, 1908.

Sound Sense.

A certain physician in San Francisco, a few years ago, worked diligently for six weeks with his remedy in a high potency, selected entirely upon the subjective symptoms, trying to remove a ringing noise in a patient's ear. He failed miserably, for the noise came from inspissated cerumen, which was removed by another physician, and the noise cured.

As a materia medica student this man has few, if any, superiors, but his failure was absolutely inexcusable in this case. Had he been less biased in favor of the purely subjective system method of taking his case, the results would have been very different both for the patient and for his reputation. And let me add, much better for homœopathy also, for the patient naturally inferred that his method was the homœopathic method, and being a fizzle in the full sense of the word, went to an allopath, who scored both the man and the method unmercifully.

To know only materia medica is not sufficient although it may be the most important branch in our work. To know only diagnosis and not materia medica is but part knowledge, and mighty little consolation to a patient, for what he wants is a cure and not a diagnosis. And to understand surgery, and surgical disease alone, is not sound understanding, for all diseases are not surgical diseases. Hence, to take a case properly it is necessary to understand the materia medica so that one will be able to differentiate between two or more remedies when it becomes necessary to do so. Furthermore, only he who understands the materia medica is able to obtain a full import of the symptom, i.e., is able to uncover all that goes with a symptom of pain or whatever else it may be. The word pain indicates little or nothing, but when you add how, when and where to it, i.e., add the modalities, you obtain valuable data. But strange as it may seem, the modalities of a remedy mean little or nothing to a poor materia medica student.

To this knowledge must be added the knowledge of physical diagnosis, for without this there can be no clear or intelligent interpretation of the symptoms. There must be added a knowledge of surgical disease. Though one be no surgeon, he should know when a surgeon is or is not needed. In short, many things directly of a medical and surgical character must be more or less thoroughly understood.

I recall a patient now who had a very decided mental derangement, the result of having read incessantly for years occult literature. The family physician, a very able man in "medicine," failed utterly to understand his patient's symptoms and made a diagnosis wide of the mark and came within an ace of sending his patient to the asylum. His leaving the city for a time and the calling in of another physician saved her this awful calamity.

She was placed in the hands of a man well versed in many branches, and particularly in the lines of the occult, who quickly saw things from a different view point and worked along different lines and straightened things out. The first man knew nothing of occult literature, and like most of us when we know little or nothing about a thing, talked most dogmatically against it, and so antagonised his patient that he lost all control over her. A knowledge of the occult may or may not have a direct bearing upon the subject of medicine, but some knowledge of it helps us wonderfully to understand many peculiar things we see in patients. And so with other subjects. We come closer to our patients when we understand a little of what is all important to them.—Dr. Philip Rice, *Medical Advance.*—The *North American Journal of Homœopathy,* October, 1908.

Amputation of the Leg at the Knee-Joint.

At the sitting of the Académie des Sciences on the 13th of September, M. Velpeau, of the Hôspital St. Antoine, read a paper on the above operation, which, according to him, is not so dangerous as is generally believed, and ought even to be preferred to ordinary amputation, where the joint is healthy. He has himself performed it twice with complete success, once in January, 1830, on a young man affected with necrosis of the tibia part of which it was M. Velpeau's intention to remove, when he found, after having made a transverse incision, that the bone was throughout diseased, so that it was necessary either to perform the amputation of the thigh, or the exarticulation of the leg; he preferred the latter, as, in fact, a part of it was already performed by the transverse incision. The operation did not afford anything of interest; the wound speedily healed, and the patient was quite well after eight weeks. The second case was that of a robust man, 29 years of age, with fracture of the left leg: when he was brought into the hospital, twenty-four hours after the accident, considerable hæmorrhage had taken place, and almost the whole of the limb was covered with ecchymosis; the fracture appeared, however, simple, and there was but a small wound at the inner ankle, and scarcely any swelling. The limb was carefully dressed, and a favourable result of the case was anticipated, when, on the following night, the patient was suddenly seized with furious delirium, the cause of which could not be ascertained until the fifth day, when it was discovered that mortification began to take place, and three incisions having been made over the fracture, the tibia was found to be minutely fractured, and its fragments surrounded by a gelatinous mass of very offensive smell. Profuse suppuration of an unhealthy kind ensued, accompanied by excruciating pain and hectic fever, so that the removal of the limb did not admit of any longer delay. The success of the above case determined M. Velpeau to perform the exarticulation of the leg at the knee-joint, as amputation below it was inadmissible. The operation took place on the 4th of June, and the patient was perfectly cured on the sixteenth day. The third case which had come under M. Velpeau's observation, was that of a young man whom he happened to examine at the Bureau Central, and who in his twelfth year had undergone the operation at the Hôspital des Enfans, on account of gangrene. From these instances, and others related by medical writers, M. Velpeau concludes, that exarticulation of the leg ought not to be entirely excluded from the index of surgical operations, as it has hitherto been done by most modern writers on surgery.—The *Lancet*, October 10, 1908.

Causes of Tropical Abscess of the liver.

We take the following from a paper read in the *British Medical Association* and published in the B. M. J. October 24, 1908.

Heat.—Prolonged exposure to it is both a determining and a co-operating factor. High ranges and sudden fluctuations are hard to bear. In India the special endemic areas are Bengal, Orissa, Burmese Coast, the Western and Southern Commands. All these areas are enervating, specially to the European, and any civil surgeon in these parts will bear testimony to the climatic effects on the digestion, metabolism, and nervous system.

Food.—In India, even at the least unhealthy time of the year, a few scratch meals, or insufficiently or badly cooked food, may soon result in dysentery. On the other hand, a too stimulating and excessive regimen will produce also physiological congestion; this by daily repetition, combined with a sedentary life, or exposure to the sun, or chill, or excessive iced drinks, passes to the pathological congestion of hepatitis, and if errors of diet are conjoined with alcoholic excess, the evil progress is rapid.

Alcohol.—One of the strongest predisposing causes to pathological congestion of the liver in India is alcoholic excess. By this, I do not mean that the patient has drunk to inebriety, but that he has overstepped his physiological equation for toleration of the poison. I am of the opinion that in Indian congestive liver affections, primary or secondary to alimentary changes, alcohol should be absolutely abolished from the diet, and, if given, only used as a drug, and not as an article of food. It is probable that the temperate habits of the native soldier as to food and drink are most important factors, combined with his physiological adaptation, in giving him his comparative immunity from liver abscess. It is true he suffers much from dysentery, but he does not handicap his liver by living like a European, and so escapes the more dangerous affection. Generally, in proportion as he takes alcohol, so does he suffer.

Malaria.—This is not a cause of liver abscess, like alcohol, but it decidedly aggravates the symptoms of tropical liver in the European, just as it disposes to, and frequently aggravates, dysentery, and thus paved the way for suppuration when in conjunction with heat, alcohol, and dietetic errors.

The Abuse of Exercise.—Over-exercise is fatigue, and any so-called sport which requires, after its termination, that the individual must have a whisky peg is a fatigue duty and not a healthy exercise. Soldiers in India frequently engage in football as early as 4 p.m., and cricket may be played throughout the day, even in a hot sun. The strong man does it at his peril, the weakling gets weeded out. In many parts from the Himalayas to Ceylon I have noted these very doubtful practices. Following on them comes the rest—sitting in the cool evening breeze, in sweaty garments clad, slaking of furious thirst by copious iced drinks, alcoholic or otherwise. The tendency to "chill," from the depressing influence on the vasomotor system, now comes into play, and this is one of the things that only clinical experience in such climates can bring home to one. Truly it is no wonder that digestive disturbances follow so often, preceding inflammatory mischief.—The *British Medical Journal*, October 24, 1908.

Ficus Religiosa.

The late venerable editor of this Journal used to advise our colleagues of Europe and America to use always cautions in accepting the provings of drugs conducted by persons without any regular medical training. That he had good reasons for doing so may be gathered from the following which appears in the November number of "The Homeopathic Recorder", under the heading of "Ficus Religiosa. Is It A Fraud?".

"This Indian remedy is made from the leaves of a native tree. It was proved by Dr. S. C. Ghose of Bhowanipore. The provings will be found in Clarke's Dictionary of Materia Medica and also in the April number of the Homoeopathic Recorder, 1904. The characteristic symptoms elicited was blood in the urine, stools and in vomiting. Now comes Dr. Augustus Mattoli, Rome, Italy, who says he has tried it clinically without results. He also tried it in material doses on himself and on dogs without any results whatever. Dr. J. B. S. King, who publishes his paper in the September *Medical Advance* procured some of the tincture from the Boericke and Tafel of Chicago pharmacy and himself took forty drops and then eighty drops. "No symptoms noted." From this we may infer that the remedy is inert on European and American provers at least. Probably the old idea that each country produces the remedies suitable to its people is a true one, or else this remedy is, in the language of the day, "a fake".

In Dr. Clarke's "Dictionary of Materia Medica" we see the name "Pakur" has been given to Ficus Religiosa. But Ficus Religiosa is not Pakur; it is Peepul or *Aswatha.* Pakur is Ficus venosa. And neither Pakur nor Aswatha belongs to the specie *Moracæ.* Both of them belong to the sub-order Ficacæ which again belongs to the natural order Urticacæ.

The botanical and the native name of the tree could not have been so mistaken by Dr. Clarke had he not implicit reliance upon Babu S. C. Ghose. About the proving of the drug there is grave doubt because *Ficus Venosa* (the Pakur) and not *Relegiosa* has the virtue of stopping hœmorrhage from the bowels and the lungs. This is known to every *Kaviraj* of our country. Proving of drugs according to the method of Hahnemann is not an easy affair and the future compilers of our Materia Medica will do well to exercise their judgment in sifting the chaff from the grain, because medicine not well proved placed in the pages of a high authority is calculated to do more evil than good and ultimately disgrace is brought upon our profession.

Quinine Sulphate and Blackwater Fever.

D. M'CAY, in a preliminary note (*Glasgow Med. Journ.*, March, 1908), says that the results obtained from investigations carried out on the haemolysis of the red blood corpuscles seem to have a very important bearing on the supposed action of "quinine" in causing blackwater fever. In health it has been found that the action of sulphates in any form upsets, for a time, the osmotic equilibrium that normally exists between the red blood cell and the plasma in which they float. In a series of observations on this action of different sulphates—quinine sulphate, magnesium sulphate, and dilute sulphuric acid—a very serious decrease was obtained in the total inorganic salts of the plasma, implying a serious decrease in the osmotic tension of the plasma. The red cells being impermeable, no change takes place in the number of their inorganic molecules; but, by endosmosis, water passes into them, causes them to swell up, and, if the decrease in the plasma is sufficient, eventually to burst and extrude their haemoglobin. In blackwater fever the haemolysis is due probably to three factors: (1) Injury to the stroma of the red corpuscles caused by the malarial parasites; (2) the presence of a haemolysin; (3) administration of sulphates. (1) and (2) may be sufficient to produce blackwater fever, but (3) may become the precipitating cause when (1) and (2) are ineffectual—that is, the sudden lowering of the number of inorganic molecules in the plasma, due to the action of sulphates on the inorganic salts of the plasma, may become sufficient to produce a difference in pressure between the plasma and the injured red corpuscles which those corpuscles cannot withstand. Further research showed that while sulphates caused a lowering of the resisting power of the red corpuscles to haemolysis, chlorides caused an increase. In every experiment where quinine hydrochloride (particularly when combined with sodium chloride and dilute hydrochloric acid) was given, no fall in the salts of the plasma took place, but usually a well-marked rise. As malaria is the underlying factor in the cause of blackwater fever, and as, in order to get rid of that source of danger, quinine must be given, the rational indication for both prophylaxis and treatment is to avoid giving sulphates in any form, and to administer quinine in the form of the hydrochloride or acid hydrochloride. In addition to sulphates, large quantities of alkaline carbonates or compounds of alkalies with vegetable acids and potassium salts should be avoided. These all tend to lower the number of inorganic molecules in the blood, and therefore to bring red corpuscles nearer their haemolytic point. On the other hand, chlorides (quinine hydrochloride, calcium chloride, and sodium chloride) have the opposite effect, and tend to increase the resisting power of the corpuscles.—The *British Medical Journal*, October 31, 1908.

Carbuncles.

Helmuth's *A System of Surgery* is an old book as surgeries go to-day, but for the man who is not concerned with big operations, for the general practitioner, it is probably the best book on surgery obtainable. The other day while looking through it for what it has to say on "dislocations," our attention was arrested by a paragraph beginning: "Of late, however, I have adopted a treatment which has been so successful that I have been surprised at the results." The treatment was of carbuncle, and, in brief, consisted in the application of a dressing saturated with a solution of one part *Calendula* to six of water, renewing every two hours, and giving a dose of *Arsenicum alb.* 6x every time the bandage was removed. One patient who had suffered "the routine of poultices and incisions could scarcely believe that he was affected with a true carbuncle, so free from pain was he during the entire course of this treatment." The book is full of such helpful points on surgical, or semi-surgical, cases.—*The Homœopathic Recorder*, October, 1908.

Gelsemium.

"The typical Gelsemium fever, however, comes in that condition which we call, correctly or incorrectly, but certainly with great frequency, 'grippe.' That catarrhal fever which steals upon you with chilliness and vertigo, perhaps a little sore throat; which makes you too tired to breathe; you feel sleepy but you can't sleep for every muscle feels as though it had been pounded. Your face is hot and your nose runs, but your back is chilly and you feel miserable. Your mouth is dry but you don't want to drink; you want to be let alone. You know the condition—if you have never tried *Gelsemium* for this before, give it the next time you get a chance. Give a drop or two of the tincture every hour if you can't get relief with less, and I think you will not be disappointed."—The *Homœopathic Recorder*, October, 1908.

A New Treatment of Cancer.

In the recent discussion on "The Diagnosis and Treatment of Cancer" which was held in the British Medical Association and an account of which was published in the British Medical Journal of October 3, 1908, all the surgeons present almost unanimously agreed that in an operation of cancer, the enlarged glands must be thoroughly removed for they only indicate a spread of the disease to those parts. Some German surgeons recently operated in cancer and did not remove the glands; but their result was in no way inferior to the results of other German surgeons who insisted on the thorough removal of the glands.

Reports of several cases of spontaneous cure of cancer also appeared in various Medical Journals. The peculiar feature of these cases was that the lymphatic gland was extensively involved. This fact led to the conclusion that the glands had some influence in bringing on the cure.

In the British Medical Journal of October 17, 1908, Dr. Mc. Culloch has contributed a paper under the title "On the Analogy between Spontaneous Recoveries from Cancer and the specific Immunity induced by X-Ray Irradiations of the Lymphatic glands involved." In this paper he gives the report of four cases of cancer in which the influence of X-rays was tried. All these patients were under the care of Mr. Neill Mc. Gillycuddy, a specialist in diseases of the throat. Operation was either opposed by the patients themselves or was thought not judicious by the surgeon, and Dr. Mc. Culloch was requested to try the X-rays. In all the four cases the glands alone were irradiated, the actual lesion being carefully screened from the influence of the rays.

In the first case the irradiation was conducted by Dr. Mc. Culloch. An area of the size of a six penny-piece was exposed and over it was applied a Crookes tube, enclosed in a Bilot's shield, with a localiser. "The dose was 5 H units for fifteen minutes to each gland alternately every fourth day. Altogether ten irradiations were applied and the result was very successful. In the other three cases the application was made by Mr. Mc. Gillycuddy himself and the results were equally successful. The patients became practically quite well and the disease did not recur. And on the date of the publication of the report the period of freedom from recurrence was one year in the first case, ten months in the third and 9 months in the second and fourth cases.

In support of the X-ray treatment Dr. Mc. Culloch has also given in his paper an abstract from reports of 37 cases of glandular enlargement, due to Hunterian chancre treated with the X-rays. "The authors conclude that the treatment is of considerable value and in particular accelerates the healing of indolent wounds and ulcers."

It should be mentioned here that Dr. Mc. Culloch contributed an article in the *Lancet* of January 25, 1907, entitled "Observations on the Induction of Auto-vaccination in Tuberculosis and other Chronic Glandular Infections by the X-rays as revealed by the Opsonic Chart in the former." And since the publication of this article several reports have been published of cases by X-ray irradiation which support Dr. Mc. Culloch's views. Dr. Mc. Culloch's treatment is based upon the following hypothesis. All diseases of microbic origin involve the production of certain immunising agents. These agents are elaborated within the deep lymphoid structures and are of colloid nature and therefore can not pass through the capsules of the glands. "Iodides produce a resolution of such tissues and the therapeutic action of the X-rays is very similar, but with this difference, that in the case of the former, months of medication are necessary, and in the latter it is a matter of hours, judiciously extended over a few weeks."

The same effect may be brought upon by starvation whether voluntary or otherwise; for it is well known that during starvation those tissues which are of rudimentary organisation are first drawn upon the needs of the organism.

Involvement of the lymphatic glands should be looked upon according to Dr. Mc. Culloch's views "as an extended response of the body in the metabolism of bodily defence." If Dr. Mc. Culloch's views prove to be true we hope that the lymphatic glands and other internal structures shall not be so recklessly removed by surgeons as is the practice at present.

In conclusion we may say here that this great investigator Dr. Mc. Culloch has come to our fold since his last appearance in the British Medical Journal.

CLINICAL RECORD.

Foreign.

CLINICAL VERIFICATIONS FROM MY NOTE BOOK.

By W. J. HAWKS, M.D., Los Angeles, Cal.

CASE 1. A woman, aged thirty eight. Has had catarrh for two years. The nasal passages were first affected, but at present the chief difficulty is in the larynx, the disease having progressed downward. The patient has had a cough as long as she can remember. There is an evident tendency to pulmonary trouble, she having had "lung fever" several times. She takes cold easily, and during each attack she has a loose cough, with profuse expectoration, streaked with red or brown. She now has nausea after coughing, is very nervous, very sensitive to cold air touching the back of her neck, which is stiff; she is very nervous, and excitement brings on the cough; cold chills run over her body and leave "Goose pimples."

The symptoms which characterize this case and indicate the remedy are, especially, the inducing of the cough by excitement and the chills which leaves "Goose pimples." Gelsemium covers all the prominent symptoms. Arsenicum and ipecac. are both to be thought of, the former on account of the nervousness and the sensitiveness of the nape of the neck to cool air; and the latter because of the loose cough with nausea. But Gelsemium is the remedy which covers all the symptoms and has its characteristics prominent.

This remedy was given April 22. On the 29th the report was: "Better in every way." Placebo.

May 20. The old symptoms are all better, but the patient complains of being weak and tired. Placebo.

When the patient last reported the only complaint was of the feeling of a lump in the throat, with a tickling sensation; worse in damp weather. All this was relieved by rhus.

This latter condition—or the later symptoms—recall to my mind a very interesting case of "lump in the throat" of a lady vocalist. The lady, according to the best of judges, gives bright promise for the future as a singer having a voice of most wonderful compass, and is now in Europe, perfecting her musical training.

CASE II. Young woman, aged twenty-two. She had been harassed for five years and was discouraged to the point almost of giving up her dearest ambition by the persistent and annoying sensation of a lump in the throat, which seriously interfered with her efforts in vocal practice. I prescribed for her several times without the conviction that I had the right remedy and without effect. I could elicit no other symptoms, as she said she was in perfect health and certainly seemed to be.

I finally drew from her the fact that on observation she found that it was more troublesome in damp weather, and that in "swallowing the lump down" it often *hurt her between the shoulders.*

Rhus is the only remedy I know of as having this particular symptom with all the others. It relieved her completely, so that she was not troubled for months; and when, after several months, it did return the same remedy promptly relieved. At latest accounts there had been no sign of a return of the trouble.

Case III. A man, aged sixty-five, has had incontinence of urine for thirty years, being unable to retain it either day or night. The affliction has increased gradually during that period from a trifling inconvenience to having become the bane of his life. He complains of considerable pain in the region of the bladder if he "takes cold," or retains his urine long after first feeling the desire to avoid it. His general health is good.

The trouble followed the suppression of the "itch" by ointment; his feet are nearly always very cold except at night, when they often burn on the soles so that he puts them out of bed and against the cold wall to cool them; he often has weak, faint spells through the day, especially an hour before the noon meal. Sulphur is the remedy indicated both by the cause and the symptoms.

This case also reminds me of one almost identical with it. The patient is connected, in an official capacity, with one of our largest railroads. He is a large, well-formed, healthy-looking man. He has suffered more than five years from a painful inability to retain his urine. An hour was the longest time he could go without urinating, and often not so long without pain. He had never taken homeopathic medicine and was ready to go east for treatment when he consulted me. I found sulphur indicated by a hot vertex headache; cold and hot feet; weak, faint spells during the day; hot flashes; "gone, empty" feeling about 11 a. m., etc.

The relief was almost immediate, and the improvement has been steady for a year or more, with an occasional partial relapse, until, at the present time, he retains his urine without pain or other discomfort for three hours or more by day and five hours at night.

Case IV. A boy, aged thirteen, with eczema capitis. It appears in little red pimples, which exude a sticky fluid, having the appearance of honey; there is much itching; he has headache if he gets heated or nervous; is dull and "lazy," and takes cold easily. The eruption first appeared behind the ears and is now worse in that locality. Graphites enabled him to report much improvement in one week.

Case V. A man, aged fifty-six, has had "aching in his bones for the past thirteen months," worse in cold and damp weather; worse at night, and water aggravates it; he has a cough, with pain in the chest; and aphthous condition of the mouth, and is restless at night. Mercurious caused a marked improvement in a week.

Case VI. A man, aged fifty. The patient sprained his ankle five weeks ago. He has been dressing it with various liniments since that time, but the joint is still quite stiff and very painful. The pain is less when moving the limb gently, and is worse at night and while at rest; it is stiff and painful when beginning to move, but gradually improves with the motion; the patient cannot sit or lie still long without moving.

The condition here is evidently rheumatism, with the sprain as the exciting cause. A sprain cannot of itself produce rheumatism. An individual in good health, and without predisposition to rheumatism, will recover from such an accident without medicine. But it is when there pre-exists a constitutional taint, hereditary or acquired, that medication is necessary. In such a case the constitutional disorder seems to be attracted to the weakened spot, and curative efforts must there be aimed, not at the sprain, per se, but at the constitutional predisposition, and our best guide is the totality of the symptoms. Rhus was the remedy given, and caused a marked improvement during the first week. The patient did not report afterwards.

Case VII. A woman, aged fifty-six, with dyspepsia. She has suffered more or less for years, sometimes better, at others worse; she complains of much sour belching; appetite is poor; stools are of indigested food; head feels large and heavy and food lies like a stone on the stomach; she is worse after midnight, and cannot sleep after 3 p. m.; there is much throbbing backache; she feels better while walking out of doors, and she is very irritable.

At the end of two weeks the patient reported that she was very much better; and, if the exciting cause can be removed, that remedy will cure the chronic result just as did Rhus in a former case. But medicine cannot take the place of nature, nor can it bolster the animal economy against the continued attacks from unphysiological abuse. In this case as in the majority of cases of this truly American disease the exciting causes are the swallowing of improper food in a hurried manner. Americans live too fast to take time to eat their food. They swallow in ten or fifteen minutes food enough to have kept them eating three quarters of an hour. They neither masticate nor insalivate their food in the mouth where the apparatus and material have been furnished by nature for that purpose. The stomach tries to do both, as well as to supply its own peculiar functions and material, and is consequently overworked. As a result exhaustion follows, and finally inability to do the work at all; and indigestion, with all its hypochondriac horrors, becomes a settled disease.

The exciting cause must be removed in the first place, in this as in all cases. The best way to accomplish this is to prohibit the use of all fluids at meals. Then the patient will be obliged to masticate in order to get lubricating material enough to make deglutition

Case VIII. A boy, aged 8, with catarrh, and occlusion of the lachrymal ducts. In this case the tears overran the cheeks. There is a scrofulous history in the family. As an infant he had a large head and slowly closing fontanelles; was slow in learning to walk; he now has cold, sweaty feet; the stockings are always damp. Calcarea was prescribed, especially on account of the prominent symptoms and the result was most satisfactory.

This catarrhal closure of the lachrymal ducts I regard as one of the surest indications for calcarea. Silicia is nearly as often indicated.

Case IX. A man, aged twenty-one, with bronchitis. He has had a cough for three months, and raises "yellow, thick phlegm," especially when first rising in the morning. He has a bitter, slimy taste in the mouth in the morning; not much appetite; dislikes fat especially, and it disagrees with him if he eats it. He feels better out of doors; coming into a room at all warm or with a "close" atmosphere cause faint, dizzy feelings. He is low spirited; the tongue is coated and the cough loose. Pulsatilla is indicated by all the symptoms.

In a week there was a considerable diminution of the cough; the bad taste had disappeared and the patient was in all respects better—The *Medical Advance*, September, 1908.

A CASE OF PEREPHERAL NEURITIS.

BY A. E. HAWKES, M.D.

On July 9, 1908, J. M., aged 52, the subject of peripheral neuritis, sought relief from the following symptom, which had troubled him for three days. He felt, he said, as if a dull instrument were being pressed through the right temple. The pain was confined to the right side, but it extended almost to the middle of the forehead, approximately from the temporal fossa to the frontal eminence. *The Cypher Repertory* directed attention to *cocculus* and other medicines, and in Allen's *Handbook*, p. 378, line 31, transferred from Hahnemann's *Materia Medica Pura*, the symptom is detailed thus: "Inward pressure in the right temple, as if a dull instrument slowly pressed deep into brain." Relief came in a day or two, after a few doses of *cocculus* 3, but the pain had not entirely gone until a fortnight afterwards. It may be remarked that Hahnemann was indebted to Gross for the proving.—The *British Homœopathic Review*, November, 1908.

ACUTE INFLAMMATION OF KNEE JOINT.—NAT. PHOS.

CASE I.

July 23, 1908.—E. C., parlourmaid, complained of "rheumatism of right knee." There was acute synovitis, for besides the pain the knee was swollen and hot, and the joint distended with fluid. It pricked when pressed. *Apis* c.m. t.d.s. *Ung. Rutæ.*

24*th.*—"Better." Rep.

25*th.*—"Better." Nothing given.

26*th.*—Less well. Still pricking, and inclined to give way on going downstairs, but less tense, and less hot. *Gon.* 30 t.d.s. *Ung. Rutæ.*

27*th.*—Pricking worse; aching. Pricking in upper part of tibia, in the bone. Less hot and tense. Nocte, *Nat. Phos.* 6x. gr. j. (dissolved in a little water for three sips). *Ung. Rutæ.*

28*th.*—*Much* better—nearly well." Rep. *Nat. phos.* only.

29*th*—"I think it is well!" No more medicine. On examination seems well.

30*th.*—"Is quite well."

CASE II.

An anæmic girl, an old patient of Dr. Macnish's, came up on Tuesday, July 24, 1908, complaining of rheumatism. One knee-joint was swollen and hot, and painful. She got *Nat phos.* 6x, and when she came up on the following Tuesday said that all the rheumatism was gone and the knee well by Thursday (two days after she began the *Nat. phos.*).

CASE III.

I remember some years ago one of our housemaids had "rheumatism in her knee," which was hot, swollen, and very painful. She got a pinch of *Nat. phos.* 6x powder in water for three sips, and next morning the knee was well and *she had passed two round worms.*

Nat. phos. has a reputation for worms and for rheumatism; but the promptness of its action, in the only three acute knee cases in which I remember to have used it, makes one wonder *whether it has a special local action on the knee-joint.*—The *Homœopathic World*, September 1, 1908.

CASE 4.—VOMITING FOR TWO YEARS.

Arthur C. was a remarkable case in more ways than one.

He first came to me, aged 6, on June 8, 1903, with a history of continual vomiting after each meal, and had been pronounced incurable at the Hospital for Sick Children after three years' treatment, according to the mother's statement. On this occasion I prescribed ipec. 3x pil i., two hours. On June 22 his mother brought him again, saying he was now only sick once a day instead of after every meal as formerly. I repeated the medicine, and after July 6 saw him no more till January 20, 1908, when a lady urged his mother to bring him to see me.

It appears, the mother, forgetful of the benefits her child had obtained here on the former occasion, had been attending the Brompton Hospital for Consumption under Dr. Latham.

The boy was now 11 years old and had been vomiting again. Although it appears incredible, the mother had been taking him for *two years* to the hospital mentioned for continual vomiting without benefit. The medicine given repeated. About every six weeks he had these attacks of vomiting, which were induced by a chill or foggy weather.

I found his teeth in a shocking state with alveolar abscesses, and he was suffering from pyorrhœa and septic absorption. His colon was full of hard scybalous masses. This was on January 20, and I prescribed nux. vom. 12, ♏iii. *ter die.* On January 27 I saw him again, and his mother told me after the first dose there had been no more vomiting and he was better in every way. This happy state of affairs has continued, and I last saw him on April 2, when he was perfectly well.

One is inclined to ask whether this was a case of "cyclic vomiting," about which we read a good deal; or was it a case of "stricture of the pylorus," an instance of which has recently occurred in the practice of a colleague, where the child was about to be submitted to an operation after two consultants had failed to give relief. Fortunately for the child wiser counsels prevailed, and nux. vom. 6 at once cured the case.

The mental condition of the mother presents a peculiar psychological study, which I leave to the neurological department of this hospital (London Homœopathic Hospital) to unravel.—*The Journal of the British Homœopathic Society*, October, 1908.

Gleanings from Contemporary Literature.

THE HOMEOPATHIC TREATMENT OF CANCER.

By T. W. Burwood, L.R.C.P., L.M.Ed., L.R.C.P., L.M.Irel.

When the Secretary of the Congress Council wrote asking me if I would read a practical paper on "The Homeopathic Treatment of Cancer," I felt very flattered by the compliment paid to me, and in the first instance I absolutely and positively refused the honour, as I felt the two previous papers being in the hands of our London colleagues, the third should be from the pen of one of our provincial brethren. On second thoughts, however, I felt I was not justified in refusing, seeing that in nearly forty years of practice I have had an exceptionally large number of malignant cases under my care.

The task is difficult, and the subject one it is impossible to do justice to in the limits of a paper "which was not to occupy more than half an hour."

As this paper will be more or less a comparison between the so-called "Orthodox School" and our own, I will at once begin by quoting a few allopathic authorities.

Professor Goss says: "All internal remedies of whatever kind or character have proved unavailing; the vaunted specific of the empiric, and the enchanting draught of the honest but misguided enthusiast, have all alike failed in performing a solitary cure, and the science of the nineteenth century must confess with shame and confusion its utter inability to offer even any rational suggestion for the relief of this class of affection."

Aitken says: "In whatever part the disease may be situated, the general rule is to restore the healthy function of that part and to alleviate by opiates and chloroform or chlorodyne internally. These remedies are for a time successful, but make no impression on the disease, which silently proceeds, until the patient finally limits himself altogether to *Opium*. The quantity of morphia and other narcotics known to have been taken in such cases is something enormous. These large doses usually produce loss of appetite, narcotism, constipation, headache, and delirium, so that the patient is only the more rapidly exhausted."

Sir James Young Simpson says: "In the way of constitutional treatment of uterine and other forms of cancer we can do nothing, or almost nothing, except retard and alleviate the course of the malady; nearly every form of vegetable remedy has been tried, with absolutely no success whatever. All that we can do is to keep the patient as near the standard of health as possible, by generous diet, by invigorating regimen, and tonic medicines, and thus enable the patient to bear up against the debilitating and destructive nature of the disease."

Sir Thomas Watson says: "The treatment of this dreadful complaint can only be palliative, and sooner or later we have to fall back upon *Opium.* Anodyne enemata have often had good effect in relieving pain, or the remedy may be given hypodermically."

Sir William Roberts says: "From a medical point of view the treatment of malignant disease is entirely symptomatic. No cure has ever been effected by any vaunted internal remedies, inoculation, X-rays, or *Radium.* Subcutaneous injections of morphia are frequently called for."

Sir Eric Erichsen says: "All constitutional treatment is certainly useless, and no constitutional remedies appear to exercise any material influence over the disease. Much may be done by palliative treatment towards retarding the progress of cases that do not admit of operation. Preparations of *Opium, Conium,* and *Hyoscyamus* must be freely administered in order to relieve the patient's suffering and procure rest."

A recent writer says: "We are face to face with a rapid increase of a mortal disease, one universally dreaded more than any other, and for which we have in the majority of cases no remedy whatever."

From the foregoing it is unmistakably clear that any treatment the "old school" can employ is useless, and the only help the patient can expect to receive is from the hands of the surgeon; and in not a few instances even the knife is powerless, though the surgeon seems to think that surgery is right and everything else is wrong, and more often than not confesses he is unable in the early stages to diagnose the case, but insists on "immediate operation," that he may submit the result to a microscopic examination. If a case be cured without operation, and therefore without a microscopic examination of the growth, then of course our diagnosis is wrong."

We, as homeopaths, can certainly "go one better" than these authorities, for though we do not "lay the flattering unction to our souls" that we cure all our cases, we can lay claim to improving the health, and so put the patient in a more favourable position to battle against the disease, prolonging life for many years and making it bearable, without upsetting the whole economy by the administration of opiates.

I will now quote opinions from homeopathic authorities, but the "time limit" only allows me to indulge in a few.

Hahnemann, the revered father of homeopathy, says: "According to my observation, the solution of *Corrosive sublimate, Nitrate of mercury,* and *Arsenic water* judiciously employed are the most sovereign remedies for the cleaning of open cancer, as they are for all malignant sores."

Professor Lilienthal, after forty years of practice, says; "There are no remedies for cancer; the individuality of the patient, the cause of the affection, and the concomitant symptoms may aid in selecting a remedy which, for the time being, will alleviate the suffering."

Dr. Bayes says: "There is abundant evidence to prove that *Hydrastis* in malignant cases improves the general health and removes the cachectic appearance of carcinomatous patients, and also exerts a powerful influence for good on the glandular system."

Dr. Kidd says: "In an extensive practice during many years with a large number of unsuccessful cases, I have been three times encouraged as to the possibility of curing cancer. They were very good cases; the second, one of the best I ever had, the patient living for a long time afterwards in perfect health."

Mr. Pearce Gould says: "It has been shown that cancer in the human subject never attacks, in the first instance, perfectly healthy tissues, but in all cases it was preceded by certain other definite changes. This is an exceedingly important fact. It does not reveal the actual cure of cancer, but it certainly carries us a very important step forward, emphasises the extreme importance of conserving with the utmost care the perfect integrity of the tissues of the human body."

Resistance.—If, then, we are to combat the terribly malignant energy of this disease, the constitution of the patient must be fortified by the most nourishing diet, so that the pabulum of the blood may be able by its resistance to neutralise or antidote the germs of the disease, and by this means check the advance of destruction of tissue. We thus build up the patient's strength, and so give a better and prolonged opportunity for the action of our remedies. For in almost every case there co-exists a vitiated condition of blood which may be rectified by suitable treatment, and in my opinion herein lies the possibility of cancer being preventable, if not curable.

With but few exceptions the digestive and assimilative functions become weakened, there is loss of weight and strength, anæmia is present, together with pain and tenderness; while in cancer of the stomach we get also anorexia, emesis, hæmorrhage, and consequent emaciation.

Mr. Bland-Sutton says: "Irritation, local or otherwise, affecting the tissue may cause abnormal epithelial growths, which, rising above the general level, may produce warts. On the other hand, the epithelial growths may dip into the sub-epithelial tissues, and on account of lack of formative development run riot either from decline of vigour or constitutional debility, and originate tissue of low vitality, which we call carcinomata. The conditions favourable to the development of carcinomata are absent in the young, hence in the young, we have warts, and in the old cancers."

These facts have a bearing on the treatment of malignant tumours. Every homeopathic physician has over and over again cured warts by internal treatment; while by the same methods cures have over and over again been made of tumours in the female breast, an organ notoriously disposed to malignant neoplasms. Here the action of *Conium maculatum* cannot be denied, and what is true of this remedy is equally so of many others.

Homeopathic Treatment.—Before beginning the *homeopathic treatment,* I much regret the time at my disposal forbids me going into the pathogenesy of the medicines we employ, not that it is at all necessary, as all homeopaths who believe in *similia similibus* founded on personal provings, as well as by clinical experience, will not require to be told, what they all know as well, or better than I do, *why* we place our trust in our *materia medica.* The title of my paper is not "The Homeopathic *Cure* of Cancer," but the "*Treatment* of Cancer on Homeopathic Lines by the Homeopathic Physician."

Now, as "one swallow does not make a summer" neither does one case prove anything, but when, in a long term of years, large numbers of cases have presented themselves and with the same satisfactory results, we are justified in concluding that our remedies, carefully selected, have done good.

Sir Samuel Wilks says: "If a patient has a chronic disorder which is slowly progressing towards the inevitable end, and a medical man steps in with a certain medicine, and soon afterwards the downward progress is arrested, and is followed by complete restoration to health, or even greatly ameliorated, there can be no doubt that the *remedy* and the *recovery* stand in the relation of "*cause and effect.*"

The majority of the cases we meet with are either in the female breast, the stomach, uterus, liver, or rectum. In all these cases there is great hope of improvement, and even of prolongation of life under homeopathic treatment. My experience tells me the pancreas and bladder are not infrequently affected with malignant disease.

CANCER OF THE BREAST.

I must strongly emphasise the great importance of the early recognition of any swelling in the female breast as an aid to diagnosis and treatment. The innate modesty of the patient makes her so reticent that she will for months go on without telling even her own mother or sister she suspects anything wrong, and finally, when she has summoned up courage to divulge her fears, it is to one of her intimate acquaintances rather than to any member of her own family. By this time her anxiety has begun to tell on her health, so much so that the cachexia of malignancy has already stamped itself on her face.

When a case of cancer in the breast presents itself to me in its early stages, and before there is much or even any pain, I invariably put the patients on *Hydrastis* 1x internally, two or three drops of the tincture four times a day before meals, and a lotion of equal parts of *Hydrastis* and *Glycerine* applied by being painted on with a camel's hair brush and covered with medicated wool. I have this done morning and night.

I give strict injunctions whenever outward applications are employed that they are not to be *rubbed* in, lest irritation may be set up unnecessarily in the swelling. I also impress on the patient the desirability not to be constantly feeling if the tumour is altered in its size, and not to think about it more than she can possibly help. I also insist on the absolute necessity for the arm on the affected side being kept quiet and in a sling.

I have certainly found *Hydrastis* 1x very efficacious when persisted in for some weeks, as, besides affecting the breast favourably, it seems to influence for good the faulty nutrition.

Conium mac.—But if with the swelling there is pain in the early stages and an absence of redness, I have found one to three drops four times a day of *Conium* 3x over and over again give marked relief even more so than *Belladonna*, though this last remedy is invaluable when there is great throbbing. *Conium ointment*, B.P., applied on lint is most soothing.

Arsen. alb.—When, however, the pain is of an agonising, burning character—not only in the breast but in the nerves of the brachial plexus—*Arsenicum alb.* 3x at the onset, and then later in the fifth centesimal, is the medicine I rely on for a long period. It is more indicated where there has been at any time eczema of the nipple and areola. Its action on the blood itself, the stomach, and heart makes it most estimable "pick-me-up," and this is the name I give it to the patients, who swear by it. This medicine seems to hold the whole trouble in check. If the pains are of a very stabbing character, then *Spigelia* 3x is given, but cautiously, as I so often have found medicinal aggravation set up by this medicine if the patient is at all hypersensitive to its action, and in that case a higher dilution, the twelfth, is more suitable.

Mer. cor.—As soon, however, as ulceration is set up, with a marked tendency to the breaking down of tissue, I invariably call to my aid *Mercurius cor.* 3x internally, and a tepid lotion of 1 in 3,000 of the same externally as a wash, to be applied gently with a glass syringe twice daily. The affected part is then packed lightly with small pieces of lint soaked in the same lotion, and when changed washed out with the syringe. I continue this indefinitely, unless any fresh symptoms arise in the general health calling for other remedies. I have seen the most brilliant results in producing healthy granulation, so that what was once a large open sore has gradually healed, and at the same time the glands in the axilla have quite or almost entirely disappeared. I have a case now of a lady who came to me twelve years ago, when she had been told by surgeons she must undergo an operation. She was suffering intensely night and day with pain in the breast, arm, and shoulder. I at once put her on *Conium* 1x.

At the end of ten days she comes telling me she "has not had nearly so much pain, though she has a little sharp stinging occasionally for a few minutes, which soon passes off." The skin over the tumour looked very likely to ulcerate soon which it did at the end of five weeks, and I at once turned to my sheet anchor, *Mer. cor.* 3x. When any slight bleeding occurred I stopped the *Mer. cor.* both internally and externally, and instead gave *Phosphorous* 5 internally and *Calendula* externally. If, however, the bleeding was more profuse than a simple oozing, I employed pure *Hamamelis* or *Hazeline*. When the hemorrhage stopped I at once reverted to the *Mer. cor.* 3x.

Some patients suffer more pain in the breast at the menstrual period, and at such times I have found *Bryonia* 3x to be the panacea to the great delight of the sufferer, and that when *Belladonna* has been absolutely useless. *Aconite* in half-drop doses has frequently relieved the restlessness, and produced sleep, which, when under allopathic treatment, had to be obtained with *Opium*.

Mental distress and anxiety in family matters will often produce disastrous results in the organ affected. I have often seen the quiescent tumour roused to activity and pain after some shock or domestic trouble and in these cases frequently repeated doses of *Ignatia* 1x have been the greatest comfort to the patient. For twentytwo years one of my patients had scirrhus of the right breast, and no one knew of it except myself and my colleagues. During all these years she took nothing but *Hydrastis* 1x, *Conium* 3x, *Arsenicum* 3x, and *Mercurius cor.* 3x, according to symptoms, and not until about six months before she died, when she had a period of anxiety and strain, where there any secondary deposits. Then the glands in the anterior mediastinum became implicated with the malignant trouble, and so interfered with the action of the heart that the patient ultimately died.

Two only of my cases underwent operation for amputation of the breast. One patient, a married lady, lived four years of miserable life, and finally died of cirrhosis of the liver and malignant jaundice. The "violet leaves cure" was tried in this case, but with no good result. The other was a maiden lady who, after the breast had been removed, lived five years. To detail the history of this case and its many and varied phases would fill a volume ; but I refrain.

Besides the medicines I have mentioned in the treatment of scirrhus, there are others, amongst those usually prescribed, according to circumstances, constitution, and symptoms, such as *Calcarea carb.*, *Graphites*, *phytolacca*, and *Silicea*.

CANCER OF THE STOMACH.

The range of symptoms in malignant disease of the stomach is very wide and lays a heavy embargo on our *materia medica*. The number of medicines at our "beck and call" is very large, and to differentiate between the various drugs according to the *totality of the symptoms* and constitution of the patient is a very important task in the homœopathic treatment of the disease. *Arsenic.* 3x is well to the front for the burning pain, vomiting and emaciation so constantly present, though I think *Kali bichrom.* 5 runs it very closely, especially so if there is a tendency to constipation and a feeling of nausea when moving about. Both medicines have the same cachexia in their pathogenesis.

For the vomiting I have found *Kreosote* 3 of more help than *Ipecac.* or *Ant crudum*, though if there be coffee-ground appearances I believe largely in *Phosphorus* 5. In some cases drinking hot water, and in others sucking small pieces of ice, is very salutary. Where the patient finds relief from taking food, *Hydrastis* 1x and *Lycopodium* 5 are useful, the former more so if constipation is present, and the latter if there is much distention of the intestines and a sandy deposit in the urine, together with a mapped appearance of the tongue. *Lachesis* 5, too, is indicated by a gnawing pressure, made better by eating, but coming on again in a few hours. The emptier the stomach the more violent the pain, and here *Lachesis* 5 is good.

If *acidity* be a prominent symptom, I think, in most cases, *Pulsatilla* 1x is an excellent remedy, especially if the thought and smell of food produces disgust and aversion to eating. Though in several cases where *Pulsatilla* seemed to be called for and failed, *Hydrochloric acid* 1x, three to five drops in half a wine-glass of cold water, has often been very useful in my hands when acidity is the marked symptom. This is taken before meals. Of *Cundurango*, *Acetic acid* and *Lapis albus* and many others I have had no experience.

Diet.—The difficulty with the diet is such that it is impossible to lay down any hard and fast line to suit all cases, so much so that we frequently find "what suits the goose does *not* suit the gander." This difficulty with the diet varies so much with different patients; milky foods, which one would suppose to be the most appropriate, suit some, while others cannot take milk in any form. Beef tea, mutton, veal and chicken broths, and the like may be the only nourishment you can get in, but if a plasmon biscuit or a little plasmon powder be stirred in, so much the better. A panada of fish or chicken may agree with some and not with others. I have at this time a lady, aged 84, who has been suffering for some years with a tumour in the anterior wall of the stomach, which is exquisitely sensitive to palpation, and who suffers more from flatulence than vomiting, who finds 2 oz. of fillet steak beaten to a pulp, with a table-spoonful of cream added, and eaten as a sandwich, gives more satisfaction and comfort than anything else. She will vary the monotony by occasionally having a suspicion of anchovy paste smeared on the bread and butter. If she ventures on anything more solid she takes a pinch of Richard's lactopeptin with good effect. A calf's tail stewed in new milk and served with parsley butter, with the juice of half a lemon over it, is a most nutritious dish, and invariably liked and easily digested. When exhaustion is great I find an egg, white and yolk, well beaten up and the tumbler half filled with champagne, an excellent "pick-me-up," though egg in any other shape or form cannot be tolerated. When the stomach rejects everything, nutrient enemata or nutrient suppositories will be necessary.

I cannot speak too highly of Valentine's Meat Juice, Horlock's Malted Milk, and Neave's Food. I prefer a little concentrated nourishment frequently given to larger amounts at longer intervals. I have found a mouth-wash of one or two dessert-spoonfuls of hock in a small wineglass of seltzer water more agreeable and pleasant than anything else, the patient often exclaiming after using it, "Oh, that's nice!" and if the syphon has been on ice the better they like it.

If there is constipation I prefer an injection *per rectum* of warm water, or thin gruel with a tablespoonful of Lucca oil stirred in with it. If there is much abdominal distension, I order a tablespoonful of turpentine and salad oil in equal parts to be gently rubbed over the abdomen and then covered with hot cotton-wool. I prefer this to giving any so-called "opening medicines." As outward applications, hot, tepid, or cold compresses, according to circumstances or if in much pain, I am very partial to extract of *Belladonna* and *Glycerine.*

MALIGNANT DISEASE OF THE LIVER.

Except in the cases of "old topers," and one case of a lady who had suffered for years from diabetes, and who, when the sugar ceased to be excreted in the urine, developed malignant disease of the liver, I have never seen a case of cancer of the liver as primary disease; there has always been antecedent trouble either in the breast, uterus, stomach, or other organ. Therefore in treating the trouble in the liver I always keep in view the primary mischief, and study the patient rather than the disease.

I usually commence my treatment with *Nux vom.* 3x and *Arsenicum* 3x where alcohol has been responsible, as both these medicines, in my opinion, are antagonistic to the influence of it. *Arsenic.* is very plainly indicated if there is that sense of burning in the liver so often complained of, and accompanied by great weakness and emaciation.

When jaundice is present, whether from pressure or catarrh, I am very much attached to *Chelidonium* 1x, having seen better results from its use than anything else. If there is a history of hepatic colic (gall-stone), I at once put the patient on *Cholesterine* 3x, 2 grains every night at bed-time. If with the jaundice pneumonic symptoms are present, I then prescribe *Phosphorus* 5, which we all know has such excellent effects on both liver and lungs. *Nitric acid* 1x I have found useful if with the jaundice there be constipation and stitching pain in the liver and a sense of pressure on that organ. *Mercurius sol.* 3x is a reliable remedy, especially if there is any syphilitic history. *Podophyllin* has often disappointed me.

When ascites is present, and I feel we are nearing the end, paracentesis is called for, though only as a temporary measure. As adjuvant treatment I keep a wet compress over the hepatic region until a red rash appears, when I have it removed, and the part sponged with tepid water and afterwards covered with a layer of cotton-wool or gamgee tissue. As soon as all the redness has disappeared the compress is again applied. For the irritation of the skin, so often present in jaundice, I know nothing so soothing as a bath of a temperature of 100° F. daily, if the strength of the patient permits it. I think this helps to control the congestion and the catarrhal condition, and frequently, if taken in the evening, gives a good night's rest.

Diet—The diet has to be regulated to a nicety, and must be non-irritating and free from stimulants, unless great exhaustion is present, then I give a little brandy beaten up with egg and milk. As to drinks, skimmed milk, plenty of cold water or seltzer water if there is a tendency to constipation : fresh fruit and most vegetables I allow, except potatoes. As for meat, a little lamb, or mutton without fat, are quite as harmless as a chicken or fish. It is sometimes very difficult to tempt the patient to eat, as what may be enjoyed to-day may be repulsive to-morrow. By taxing one's ingenuity, one may concoct a relish, and if only for a time something is gained.

CANCER OF THE UTERUS.

Cancer of the uterus is by far the most frequent, and in this the female sex has decidedly the worst of it.

In the early stage, as soon as the mischief is diagnosed, I put the patient on *Belladonna* 1x and continue it for some weeks as there is almost constantly a sense of congestive fulness, throbbing, bearing down, with engorgement of the glands in the neighbourhood, and backache with or without hæmorrhagic discharge. When there is much pain and induration involving the ovaries, as well as the uterus, *Conium* 1x is a very reliable medicine, the patient always finds it soothing and comforting. *Graphites* 5 and *Hydrastis* 1x are both most excellent remedies, the former especially when there is aggravation of pain just before or at the "period" with swelling of the lymphatics, and the neck of the uterus hard and swollen with cauliflower excrescences, the latter *(Hydrastis)* if there is constipation and other digestive troubles. *Chamomilla* 3x must not be lost sight of, as I have often found it eases pain when other medicines have failed. In cases developing at the "climacteric," where pressure is intolerable and the pain chiefly located in the left side, running down the course of the nerves. *Lachesis* 5 is the remedy. For burning pain in the uterus, accompanied by acrid discharge, light or coloured, or disagreeable smelling, *Arsenicum alb.* 3x and *Carbo. veg.* 5 have done me good service, while *Kreasote* 3 internally, and a hot douche of the same drug in the proportion of 1 in 100 as a vaginal injection, have been a great comfort. When either *Belladonna*, *Conium*, or *Hydrastis* is being given internally, I usually employ a suppository made up with the same medicine and passed high up into the vagina—this is done every night or two. When the cervix is much ulcerated I have found *Mercurius cor.* 3x, and gentle but thorough warm douching for some minutes with the *Bichloride* 1 in 3,000 answer well.

For the hemorrhage, which is sometimes very alarming, *Sabina* and *Secale* have not always satisfied me. I have had far better results from *Crocus* 3x and *Hamamelis* 1x. Hot douches at a temperature of 110° to

115° F. may act sometimes very promptly, but if the bleeding portion is out of reach the douche is not of much use. I think a hot sitz-bath, when the strength of the patient permits it, is often very useful, and if taken daily so much the better; if at night, it generally soothes and promotes sleep. During the menstrual period great care must be taken and absolute rest enjoined for at least two days, with a vinegar compress applied over the whole abdomen. After the "period" has subsided a warm douche with one teaspoonful of Sanitas to a quart of warm water is most comforting.

The patient's whole manner of living demands careful watching. Her dress must be loose and no corsets allowed. Walking gently out of doors, thus getting all the fresh air possible, does no harm. I had a lady suffering from this trouble who was an enthusiastic tennis player and who could not be persuaded to give it up entirely. The only trouble she had after a game was the urgent necessity for the catheter, which she could not do without on these occasions. The whole *regime* must be directed to maintaining the strength at as high a pitch as possible, only allowing stimulants when absolutely necessary, and that very cautiously, lest the patient slip unwittingly into alcoholism. The bowels I keep open by allowing plenty of fruit; hot water enemata are useful, which I advise the patient to retain as long as possible, as they relieve pain and control in some degree the congestion present.

CANCER OF THE BLADDER.

I have only had two cases of cancer of the bladder, both of which were females. In one the ulceration perforated through to the intestines, so that the fæces were discharged *per urethram*, which necessitated frequent irrigation with Condy or boracic water, and this for many weeks. Both patients obtained more relief from *Thuja* 1x than anything else, though *Arsenicum* 3x and *Conium* 1x were frequently in requisition as indications arose, but when the urine became ammoniacal *Chimaphila* 1x was helpful, and *Terebene* 1x when hæmaturia was present.

In malignant diseases of the glands in the neck *Cistus canadensis* 1x carries off the palm, and in a measure holds the mischief in check, but the rapid growth of the tumour is such that in one case the knife was resorted to, with the result that in a week or two a second and fatal operation was called for.

I do not for a moment presume or expect anything I have said is at all new to my colleagues assembled here who know their homeopathic *materia medica*. My intention has been to show how, with our judiciously selected remedies, we can do without poisoning our patients with *Morphia*. In all my years of practice I have not given half a dozen injections of *Morphia* in malignant disease to relieve pain. Where sleep has been disturbed, or prevented by restlessness, I have given either *Hyoscyamus* 1x or five to ten drops of *Nepenthe*.

I do not wish it to go forth from this Congress that what I have said is all that could be said on our treatment, nor that the medicines I have mentioned are the only ones at our disposal. Though the disease is what we have to think about, the constitutional condition of the patient is equally paramount. One symptom does not make a disease ; it is *the totality of the symptoms* that must not be ignored. When case after case presents itself, and the results are the same, I think we are justified in our conclusions that our carefully selected remedies have done good.

I am fully and firmly convinced that the far-reaching action of our medicines has a great influence in checking secondary deposits. In the scirrhus case before mentioned there was no sign of infiltration in the axilla for eight years, though I examined for it on every visit, but on March 3, 1904, *i.e.*, eight years from first seeing the case, I find in my notes, "For the first time there is a suspicion of trouble in the axilla."

As homoeopaths, we do not assert that we can cure cancer except in the early stages of the disease, but we have the satisfaction of constantly hearing from those sufferers who place themselves under our care, after being previously in the hands of allopaths, the regret that they did not come earlier under the treatment we employ, as they get more relief and freedom from pain while taking our medicines than they did before, and that without *Morphia* and *Opium*. The general who is the most successful in his campaigns is the one who has the greatest amount of armament and variety of forces at his disposal. So with the physician ; he who has an intimate knowledge of our *Materia medica* has an arsenal to fall back upon, on which he can rely with confidence to assist him in fighting the enemy ; and if not in curing his patients, he can at least give relief.

We, as homeopaths, have been vilified and have suffered incredible abuse, which we have borne with rare dignity, simply because we have truth on our side and are not ashamed of our principles and practice.—The *Homeopathic World.* October 1, 1908.

Acknowledgments.

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THE
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TRAINING OF TEACHERS IN PERSONAL AND SCHOOL HYGIENE.

In the October number of this Journal, we referred to the recognition by our University of the importance of the Art of Teaching and to its scheme for granting degrees in it, and of the necessity of having Training Colleges affiliated to it for the purpose of bringing up a sufficient number of properly qualified teachers. We also published an address of Sir John Hewett on Sanitation in India in which, in addition to giving instructions to the young at schools and colleges on the principles of sanitation, His Honor insisted that the educated members of the communities under his care should make the uneducated classes understand the merits of practical hygiene. To quote the sympathetic Lieutenant-Governor's own words—"In season and out of season those who have learnt the lesson that without sanitation there can be no moral or material progress should preach to the public on the text that health means happiness."

But the misfortune is that the educated classes of this country are almost as ignorant of the laws of health as the masses, and that a proper knowledge of these laws cannot be acquired from a mere perusal of books; and unless the educated classes themselves become well acquainted with the laws of health and have become habituated to practice them in their own persons and in their own homes how can they teach them to the poorer classes and the public at large.

The first question to be considered in reference to the excellent advice given by Sir John appears to be who is to give instruction to the youths at schools and colleges on the principles of Hygiene, and how are the instructions to be imparted. In dealing with these questions we propose to confine ourselves at present to Bengal. The New Regulations of the Calcutta University seems to run counter to the steps required for disseminating a knowledge of the Laws of Health. The Old Regulations (in the University Calendar for 1908 they are termed "Existing Regulations.") demanded some knowledge of Hygiene from the candidates for the Entrance Examination and recognised Sanitary Science as one of the optional subjects in the First Examination in Arts; and a large number of our young students were beginning to see the value of health. But now that pressure is being applied from outside upon the Indian Government, owing to heavy mortality in this country during the past years, to ameliorate its sanitary condition, our educational authorities have taken it into their heads to omit Sanitary Science from the curriculum of the Matriculation and the Intermediate Examinations in Arts and in Science (hitherto known under the designations of Entrance and First Examinations in Arts), for which thousands of candidates appear every year, and to establish an examination for a Diploma in Public Health to which only Bachelors in Medicine and Licentiates in Medicine and Surgery—the number of whom can be counted at one's finger's ends—are eligible. Again, the University has done yeoman's service to the country by granting degrees in Teaching, but has omitted Sanitary Science from the groups of subjects laid down for the written examination and also for "the practical examination for testing skill in teaching by means of lessons to be given by the candidates to school classes." And this at a time when in England, America and the continent of Europe it is admitted that for the successful working of sanitary acts "a good deal of help must be asked for from teachers."

Before attempting therefore to devise a scheme for making the conditions of life healthier in our towns and villages, our University must restore to sanitary science the place it occupied in the course laid down in the old regulations for the First Examination in Arts, and make proper arrangements for the training of teachers in hygiene. In England no educational system is deemed sanitary where teachers are ignorant of the laws of health. So definitely is this accepted in practice that provision is now made in all training colleges there for instruction in this subject. The *British Medical Journal* of 8th August 1909 has published a short paper by Dr. Carstairs C. Douglas, M.D., F.R.S.E., Lecturer on public health in Anderson's Medical school, and on Hygiene to teachers in Training College at Glasgow shewing how the training of teachers in hygiene is carried out under the Glasgow Provincial Committee.

Dr. Carstairs has arranged for both systematic and practical work and regards the latter as the most important feature of the scheme. Under this scheme each student receives between 60 and 70 hours' instruction during an *annus academicus*. About 40 hours are devoted to systematic teaching and 25 to meetings for practical work. For lectures the students are divided into classes numbering as a rule from 70 to 80, while for practical work, further subdivision into groups of about 25 is carried out.

The following extracts from the *British Medical Journal* will give a clear idea of the manner in which Dr. Carstairs gives instruction both theoretical and practical and the extent to which instruction in Hygiene is imparted to the would be teachers :—

I. *Systematic Teaching.*

Two lectures are given, in the first place, to the study of the bony framework of the body. An excellent articulated skeleton has been got for this department and is used for demonstration purposes. The bones and joints are considered in detail, and attention is directed to the difference between these structures in childhood and adult life, and to the bad effects which adverse influences (malnutrition, improper feeding, bad posture) may have on the bones of the young. We recognize that a good knowledge of the bones and joints forms the basis of all teaching of physical exercises. The third lecture is devoted to the circulation of the blood, with a full consideration of the heart, its chambers, valves and action, and of arteries, capillaries, and veins. We make use here of excellent models which were got from Berlin, of diagrams, and occasionally of dissections. The nature and composition of the blood are described, and attention, directed to the part which its colouring matter plays as an oxygen carrier. The relation of this to anaemia is made clear, and a few words are added on the lymphatic system. In the next lecture this anatomical study is followed up by some teaching on the special need of healthy blood and an active circulation in chidhood in relation to growth, tissue change, and bodily and mental exertion.

Certain differences between the circulatory systems of the child and the adult are pointed out, and the effect of undue physical exertion on the heart of a child is made clear.

In the fifth lecture the students consider the respiratory system. We go into this with some fullness, as it leads up to that most important practical subject—ventilation. A general statement is first made on the function of respiration on the necessity of oxygen for all vital processes, and on the special needs for this body-food on the part of the actively-growing child. The composition of the atmosphere is detailed, and something is said about the pollution it suffers from in large cities. The respiratory apparatus—air-passages and air-cells—is then fully described, and the importance of discouraging mouth-breathing is insisted on. The circulation of the blood in the lungs and its aëration there are carefully discussed, and a few words added in conclusion on the action of the diaphragm and intercostal muscles—that is, on the mechanism by which respiration is effected. This leads up to a consideration in the next lecture of the importance of the development of a good shape of chest in the young and of the beneficial results of breathing exercises. Certain differences in the respiratory movements of the child and adult are touched on and then a precise account is given of the changes which air undergoes during respiration, and of the effects on health produced by breathing air vitiated in this way.

The seventh and eighth lectures are devoted exclusively to a study of the practical problem of ventilation, illustrated by the use of models and diagrams. The students receive all the necessary data for working out simple ventilation problems, and the question of natural *versus* mechanical ventilation is fully discussed. A considerable amount of time and detail is given to this subject, it being recognized that adequate ventilation of schools constitutes one of the fundamentals of successful education. In the ninth lecture a survey is taken of the chief methods of heating schools, and their advantages and disadvatages are duly weighed. Similar treatment is meted out to the systems of lighting, both natural and artificial, and in the latter part of this lecture attention is directed to the question of dust in schools and its relation to infectious diseases, fog production, and so forth. Practical demonstrations on these points are given by exposing gelatine plates in the room during the lecture, and showing the students later on the colonies of organism which have grown and by the producing of mist in a large flask filled with dusty and moist air, by studdenly reducing the pressure and so lowering the temperature.

At this stage, in order that practical work may be commenced, one lecture is given up to a detailed study of school structure, with special regard to the requirements of the English and Scottish codes with reference to floor-space, heating, lighting, desks, general fittings, lavatories, and so forth. In this connexion it is also adisable to say something very definite regarding the proper cleaning of the schools and on the use of sawdust well moistened with an antiseptic in sweeping operations. The eleventh lecture is the last which deals directly with practical sanitation, and in it some teaching is given on the importance of an abundant supply of good water for health, and on the ways in which water may become polluted. The principles which underlie efficient drainage are enumerated, and the effects of bad water and sewer gas on health are briefly stated. The students are taught that in any epidemic of typhoid, summer diarrhoea, or the like, all water and milk should be boiled.

We now proceed to give some account of the physiology of nutrition, and a lecture is devoted to a brief survey of the various classes of foodstuffs and their functions, with special reference to foods most suitable for the growing child. The proteid, fat, and carbohydrate values of some of the commoner foods are given, and the students are shown how dietaries are worked out. The next lecture is found all too short for an account of the physiology of digestion—mastication, insalivation, and gastric and intestinal digestion—and of the assimilation of food and its incorporation into the tissues. This lecture can easily be illustrated by simple experiments. This is followed by a lecture which treats in the first place of improper feeding in infancy and childhood, and the relation of this to the production of rickets, anaemia, scorbutic condition, and skin eruptions. The latter part of this lecture treats of the waste of the body and how it is got rid of by the skin, lungs, kidneys, and bowels. A few definite hints are given as to the importance of the formation of regular habits in childhood in relation to the last-named organs.

In the fifteenth lecture we discuss the education of the present girl pupils—the future wives and mothers—in simple dietetics and plain useful housekeeping. It is then pointed out that the general nutrition and the progress of children may be gauged by careful periodical weighing and measuring, and each student is supplied with the standard averages for height and weight at school ages of the Anthropometric Committee of the British Association. A brief reference is made to the relation of the physical condition of children to the size and nature of the houses they come from, as brought out in the report issued last year by Captain Foster and Dr. Leslie Mackenzie.

Lectures XVI and XVII are entirely given up to the nervous system, commencing with the general anatomy and physiology of the brain, spinal cord, and motor and sensory nerves. The development of the brain in early life is touched on, and a little is said on the brain centres in relation to motion and sensation. Reflex and automatic action are not neglected, and we have something to say on the physiology of "restlessness" in young animals. In conclusion, we touch on the subject of the action of voluntary muscles, on their response to stimuli, and on their power of undergoing healthy hypertrophy. Lecture XVIII is chiefly devoted to a study of the important subject of fatigue, especially in relation to teaching; and the various intrinsic and extrinsic factors that contribute to it are carefully analysed. Something is told of the work of Waller and Mosso in this field, and the use of the ergograph is explained. The lecture concludes with some teaching as to the hours of sleep needed by young children.

In Lectures XIX and XX we deal with the skin, the teeth, the nails, and the hair. The importance of local cleansing and of regular general bathing is insisted on, and school baths are specially discussed. The question of clothing is also treated of here. In Lecture

XXI the question of the teaching of hygiene in primary and secondary schools receives consideration, and we discuss the scope of the work suited to different ages and classes. A little is said here, also, on the teaching of temperance in schools, and on juvenile smoking and its deleterious effects on the bodily, mental, and moral powers.

The important subject of vision receives the attention it merits, and the anatomy of the eye and the physiology of vision are entered into with all reasonable fullness. It is thus a comparatively simple matter to make the students understand what is meant by hypermetropia, myopia, and astigmatism, and the effect of these conditions on the eyes themselves as well as on the general health. The factors that contribute to the onset or development of defective sight during school years are adequately treated of, and the young teacher is instructed how to abolish or mitigate these factors. Two lectures usually suffice for systematic teaching on this subject, as this teaching is amplified by practical work. In like fashion the twenty-fourth lecture is devoted to the subject of hearing, to affections of the throat, such as enlarged tonsils and adenoid growths, and to the effect which these (especially the latter) exercise on speech, respiration mental quickness, and general health. Then follow two lectures dealing with a few of the commoner non-infectious illnesses of a school age. To those who object that it is a mistake to turn teachers into amateur doctors, we reply that we do not attempt this any more than we try to turn them into plumbers. We are convinced, however, that it is a good thing for teachers in elementary schools to know something of the commoner ailments of childhood, for in many poor districts if the teacher does not interest himself in the health of the children no one else will. We say a little, in simple language, on such matters as headache, earache, and toothache; on habit spasm, nail-biting, and chorea; on chilblains and nose-bleeding; on indigestion, diarrhoea, worms; and lastly on rheumatism. Lecture XXVII deals with bodily deformities, their mode of production, and the ways in which they may be ameliorated by diet, posture, and physical exercises during school life. A little is said at this stage on the subject of the medical inspection of school children and the various modes in which the teacher may render assistance.

Lectures XXVIII to XXXI inclusive are given up to the important subject of infectious diseases in school life. All the ordinary infectious illnesses are treated of, and special attention is directed to such points as their early symptoms, their modes of spread, the quarantine time for each, and the earliest period of safe return after an attack. Another lecture has for its material the vegetable and animal parasites of the skin and hair, while in the thirty-third we are entirely concerned with the great question of tuberculosis.

It is felt that it is desirable the teachers should have some knowledge of ambulance work and be able to render first aid in case of accident occurring within the precincts of the school. Accordingly three or four lectures are profitably given over to this matter, and instruction is given on first-aid relief for sprains, dislocations, fractures, bleeding, burns, and drowning, or other forms of asphyxia. The course is concluded with two or three lectures dealing with the anatomical and physiological basis for the exercises of the physical code, in which we run over the great muscles of the back, loins, chest, shoulders, abdomen, and upper and lower limbs, giving the action of each, and thereafter the great general movements are considered, and the appropriate muscles for each are pointed out and classified.

II. *Practical Instruction.*

For the purposes of this work we divide up our students into subsections of twenty-four or twenty-five each, and deal with about two dozens of such subsections each week through the session. We commence by visits to schools of various types, from the newest in design and equipment to those of the most obsolete pattern (though these are becoming rarer every year). The students are encouraged to use their eyes, and are instructed how to make practical observations. They will, for example, in an empty classroom measure the floor area, ascertain the ceiling height, and calculate the cubic space per child. The window area is measured and its ratio to the floor space ascertained. They are asked if the light is adequate, if it comes from the proper direction and if it is properly distributed. In a room actually occupied, the temperature is noted, attention paid to the freshness or otherwise of the room, and to the mode of ventilation actually in use. Schools are visited illustrating both natural and mechanical systems of ventilation and in the latter instance the students visit the fans and see the whole apparatus at work. In the schools they inspect the desks, blackboards, walls, and general furnishings, and a kind of oral examination is kept up during the whole hour's visit. Two or three meetings are specially devoted to this kind of work, but in every school visited threafter for other purposes, a few words are said on ventilation and lighting at least. Nearly all the subsequent visits for practical work are developed to the study of the children. On one day it is muscular development and general nutrition that claim attention, on another it is posture and gait. Something may be said and noted on wearies and fatigue in almost any class visited, and the extrinsic and intrinsic factors that contribute to it can be determined. Every student is then taught how to examine the throat and to recognize enlarged tonsils, and the general and local conditions suggestive of adenoids. The effect of the latter on speech is clearly demonstrated. Rickets receive careful attention in order to impress on the students the crippling effects a preventable disease may have, and the question of enlarged glands and their relation to tuberculous infection is not neglected.

In order that teachers may help in the work of medical inspection of school children, especially in the way of collecting and tabulating physical data, we spend two meetings on practical work in weighing and measuring children. Height and weight are carefully ascertained, compared with the standards, and the differences noted. We usually teach the students also how to take the length and breadth of the head, and how to work out the classification as dolichocephalic, mesocephalic, or brachy-cephalic. Two days are devoted to the important matter of eyesight testing, and the class has ample opportunity of practically becoming acquainted with the use of the test cards for far and near vision. Another day is given up to the subject of hearing, and to the testing of that sense by the watch and by whispering. We do not neglect such practical points as the hair, the skin, the teeth, and the clothing, and observations are made in connexion with all of these. Our great object is to get the students to observe for themselves, and to help them to interpret correctly what they see, and to correlate these various phenomena with their practical work as teachers. If possible, we like to take the classes to visit special schools, particularly those for physically and mentally defective children, in order that they may see the effects of bad nutrition in early life and adverse home conditions upon the mind and body, and also the special means of instruction given in these schools. Twice during the session each student fills up the details of a schedule for the physical examination of school children, first of all on a somewhat restricted scale, after, perhaps, ten meetings for practical work; the second, which is thoroughly detailed, at the end of their course.

WHY AM I A HOMŒOPATHIC DOCTOR?

By Dr. T. W. Burwood.

I Have so often been asked why I am such an enthusiastic admirer of Hahnemann, the discoverer of homœopathy, that I am emboldened, at the request of the Editors of this Review, to write the accompanying article, hoping my readers will banish from their minds any idea that it is written as an egotistic ebullition or advertisement.

In my early childhood I was in very delicate health, so much so that I was almost constantly under the doctor's hands, and "suffered much from many physicians," for there was not a medical man of any repute in the Eastern Counties whose opinion was not sought on my behalf. Even to this day I remember the filthy-tasting physic, and nauseous powders and pills, wrapped up in jam to screen their vile flavour; the very thought of black currant jam and jelly still causes me a revulsion of feeling amounting to disgust. How well I remember on more than one occasion being blistered on my chest and back, and the agonizing torture I went through until the blister was removed, the bleb cut, and the cool, clarified lard applied!

As time passed on, in spite of, and not thanks to, doctors and physic, my health gradually improved and I was sent away from home to boarding school, and placed under one of the best of men, who, being informed of my delicacy, watched over me with the greatest care. On one occasion I was taken ill and sent to bed, when my master gave me three tiny globules out of a tiny tube out of a tiny black case. When he and his wife, on retiring to bed, came to see me they found me better, gave me three more globules, and in the morning I was quite well. I learned afterwards the little case was one of homœopathic medicines. After that time, whenever I ailed anything, I was dosed with those little "hundreds and thousands," and always with success. The simplicity of the whole thing, the getting well without nasty medicines, appealed very strongly to me even as a child, and from that day to this I have never taken a dose of allopathic medicine.

Years rolled on, and as I grew from youth to manhood I became so enamoured with the principle *Similia similibus curantur* that I devoured all the homœopathic literature I could lay my hands on.

On one occasion my father was taken seriously ill, and the family doctor, an allopath, was called in, but day after day he grew gradually worse; his condition was such, the medicines he had had given him so salivated him, he could take his teeth from their sockets and put them back again. The sight he presented, with swollen gums and loosened teeth, I shall never forget. Being the eldest son, I suggested a consultation should be held, which was done. The consultant said the treatment was wrong, and I then suggested a change of doctor. A homœopathic physician was called in, and in three weeks my father was quite well. This made me more than ever enthusiastic in my reading, and I actully found myself recommending my friends to take certain homœopathic medicines for their ailments, which always did them good.

When I married, my wife and I never took anything but homœopathic medicines, and our children were brought up strictly on homœopathic lines. Unfortunately, where I then resided there was no homœopathic doctor within twelve or thirteen miles, so that when anything occurred which was beyond my power of diagnosis and treatment I had to call to my aid Dr. Roche, of Ipswich. So began a lifelong intimacy with one of the most sterling Christian gentlemen it has been my pleasure to know. His two sons, Dr. William and Dr. Ebenezer, followed in the footsteps of their father, and are now, and ever have been, successful homœopathic physicians. One day, after having been to see my eldest daughter, I accompanied him back to the railway station; I then asked him what induced him to become a homœopath. He said: "At the time I was a medical student in Dublin there was an epidemic of cholera, and I was house physician at the hospital there, but regret to say none of my cholera patients recovered. Years after, when I was in practice as an allopathic physician in Liverpool, we had another epidemic of cholera, when every doctor was busy, and I among the number. One day I was sent for to see a man who was ill with cholera, but could not get to him as soon as he and I both wished. On my arrival another doctor had already been called in, whom I found sitting by the patient's bedside, and giving him homœopathic globules. I smiled and said, 'You surely do not expect to cure a case of cholera with those little things?' He said, 'I hope so, as I have not lost a case yet! I then said, 'That is more than I can say, as I have lost all mine!' I asked him if he would allow me to watch the case, which he did most willingly. The case recovered, and others I saw recovered too under the same treatment. This opened my eyes, and I felt there must be something in homœopathy. I then set about reading the homœopathic *Materia Medica,* and other books on the subject. I was at this time one of the physicians to the Liverpool Infirmary, and when opportunity presented I prescribed homœopathically for the patients under my care. With such success did I do this for twelve months, that I felt I ought not to go on without telling the Committee and the other Infirmary doctors. This stirred up such a hornets' nest that I was asked to resign, which eventually I did; then I declared myself a homœopath, and have been one ever since." By this time we had reached the station, where I shook hands with a gentleman who was not ashamed of his convictions, and who for consciences' sake threw aside his old armour for the more certain homœopathic armamentarium. Such evidence, from a man whose integrity was beyond doubt, convinced me more than ever of the truths of Hahnemann.

As a schoolmaster I had frequent opportunities of testing the value of homœopathic remedies in small ailments occurring among my pupils and their friends, and with so much success that I felt if one so unskilled and from a *dilettante* point of view could do so much goood, how much more so if endowed with the learning to be obtained in attending one of the first medical schools of the country ! I therefore, after much thought and deliberation, decided to relinquish the scholastic profession and entered myself as a medical student at University College and Hospital, London, where I was fortunate in obtaining the teaching of such brilliant professors and distinguished practitioners as Sir William Jenner, Sir J. Russell Reynolds, Sir Wilson Fox and Dr. Sidney Ringer in Medicine, and Sir Eric Erichsen, John Marshall, Sir Henry Thompson and Christopher Heath in Surgery. Yet with all this array of talent I heard nothing in the lecture room, nor saw anything in the wards, to induce me to alter my views as to homœopathy.

In the year 1891 my old friend Mr. Harry Harris was President of the Homœopathic Congress held in London. As we both started on our medical career at the same time, and had had twenty-one years of homœopathic practice, I wrote him a letter which he might, if he thought fit (this he did), incorporate in his Presidential address, provided he did not let my name appear. I wrote : "During all these twenty-one years I am very proud to assert I have never lost a case of typhoid fever, scarlet fever, small-pox, measles, rheumatic fever or croup, and I can count my deaths from diphtheria on the fingers of one hand. I do not write this in any spirit of egotism but for the glory of homœopathy."

Since then, as from the first, I am proud to say the homœopathic law has been my guide, and with excellent results all through, so that I have every reason in not being ashamed to be known as a true disciple of Samuel Hahnemann, the discoverer of homœopathy !

REVIEW.

A Handbook of Clinical Microscopy. By M. Kesava Pai, M.B., C.M., (Madras) and P. S. Ramchandrier. Printed at the Times Press, Bombay 1907. Price Rs. 3-8.

This is a neat handbook on clinical microscopy and every medical student should obtain a copy for his own use. The book is divided into twelve chapters. The first one deals with the use of the microscope and is a very useful chapter because we have seen many medical men thoroughly ignorant of the use of the microscope. The second chapter deals with bacteria and their cultivation, the third is on the examination of normal blood. The next four chapters deal with the malaria, the mosquitoes and their relation with each other. The eighth chapter is on serum diagnosis in which the author has given the aparatus required, the method of collecting blood, the preparation of bacterial emulsion, dilution of serum, putting up for sedimentation, significance of the reaction and the microscopic examination for agglutination. The relapsing fever, filariasis, plague and Kala-azar have been considered in the ninth chapter. Pulmonary tuberculosis, leprosy and mycetoma have their place in the tenth chapter and the last two contain the examination of the discharges. The book is a very useful one and contains all the information wanted and it is richly illuminated by figures and plates.

The Clinic Repertory. By P. W. Shedd, M. D., New York. Including a Repertory of Time Modalities, by Dr. Ide of Stettin, Germany. Translated from the Berliner Zeitschrift Homöopathischer Ærzte, Band XXV., Hefte 3 and 4. 240 pages. Cloth $ 1·50. Postage 8 cents. Philadelphia. Bœricke and Tafel 1908.

This book will prove very useful in the hands of running practitioner who hardly have any time to look to the larger and more elaborate works. The chapters on "common diseases and conditions" "keynotes of fifty Polychrests" "common sequences" "antidotes (dynamic)" "Poisons: Antidotes" are very useful and the informations they carry are almost complete. The time modalities by Dr. Ide of Stettin will help on many occasions in finding a true remedy, though of course such remedies will depend more upon clinical experience than upon proving. The lunar and the seasonal aggravations have many a time been noticed by observant physicians who keep their senses open. The effect of medicines used at that time may be carefuly noted to guide him in future and also to be a record for those who want to take advantage of such observation.

How to Take the Case and to Find the Similimum. By E.B. Nash, M.D., 55 pages. Cloth, 50 cents, *net* postage 3 cents. Philadelphia. Boericke and Tafel, 1907.

Dr. Nash is too well known in the profession to need any prefatory introduction. His 'Leaders'—"in Homœopathic Therapeutics"—"in Typhoid fever"—"in the use of Sulphur" have already made a name for him. The present volume has really filled in a long felt want. The failure or the success in practice will depend greatly upon the manner how we take cases. Charlatans in Homœopathy think that to treat a case is a very easy matter. This proves their ignorance only. We must not leave out even the apparently unimportant symptoms, because we have seen many a time such symptoms have become the guiding points in our selection of remedies. "It is natural" says the author "for a patient to think that if he tells us that he has a cold, or indigestion, or rheumatism, that we ought to be able to prescribe for him forthwith, and strange to say I have met more than one physician who seemed to have no better conception of Homœopathy than this, and evidenced it by asking such questions as, 'doctor, what is your best remedy for diphtheria or rheumatism, etc. There is, of course, only one proper answer to such a question, from homœopathic standpoint, viz., the indicated one."

Dr. Constantine Lippe, when he succeeded to cure a case of chronic quinsy, abandoned by his family physician, an old school regular, who told the patient that the only way was to " grin and bear it" was asked by the doctor what is the remedy for quinsy ? "I have no remedy for quinsy" was the reply. " But you did with Mrs. L. over there what I have not been able to do at all; what did you give her? " asked the doctor again. " Oh I gave her *Murcurius*, but the next case might not need that at all " said Dr. Lippe. He then proceeded to instruct in the art of prescribing. But the doctor answered with a sigh, " I am too old to go into all that." The art of case-taking is really a very difficult one and every physician in order to be a successful one should learn it properly. The book by Dr. Nash should therefore be in the hands of every physician.

Meteorological Observations taken at 8 A.M. at the Indian Association for the Cultivation of Science, Calcutta.

October, 1908.

Date.	Barometer (corrected.)	WIND.		TEMPERATURE.		Humidity.	CLOUD.	Rainfall in inches of past 24 hours.
		Direction.	Velocity per hour in miles.	Maximum.	Minimum.		Proportion.	
1	29·733	S S E	2·1	93·0	80·5	84	6	0·03
2	29·736	S S E	3·4	94·0	82·0	85	8	*Nil*
3	29·762	N E	2·6	94·0	82·0	87	8	,,
4	29·789	N E	1·3	89·0	80·0	91	5	0·07
5	29·800	N	1·7	89·0	78·0	85	7	2·10
6	29·760	N E	1·2	89·0	78·5	83	4	*Nil*
7	29·731	N W	1·5	90·2	78·0	78	8	,,
8	29·710	N N W	1·5	89·3	79·5	74	7	,,
9	29·711	N W	1·0	90·5	77·5	77	*Nil*	,,
10	29·817	S S E	1·4	90·5	77·0	75	,,	,,
11	29·762	S E	1·5	91·0	79·5	89	8	,,
12	29·865	N E	1·5	91·6	79·0	91	9	0·52
13	29·772	N W	0·3	91·6	78·0	85	*Nil*	0·16
14	29·864	S S E	× ×	91·5	78·5	85	6	*Nil*
15	29·852	N N W	× ×	89·5	80·2	81	9	,,
16	29·889	N N E	× ×	89·8	79·2	79	2	,,
17	29·888	W N W	1·4	90·0	78·5	80	*Nil*	,,
18	29·875	E N E	0·8	88·8	78·8	85	,,	,,
19	29·877	S	× ×	93·0	79·0	79	,,	,,
20	29·900	S S E	× ×	91·5	79·0	79	,,	,,
21	29·903	N	1·0	91·0	78·0	63	,,	,,
22	29·923	N W	1·0	90·5	75·0	61	,,	,,
23	29·884	Calm	1·3	90·0	73·0	59	,,	,,
24	29·898	E	1·4	89·0	73·0	60	,,	,,
25	29·943	E	1·2	87·0	72·0	57	1	,,
26	29·916	N	1·5	86·0	73·0	71	*Nil*	,,
27	29·886	Calm	1·4	86·8	73·0	70	,,	,,
28	29·860	Calm	0·9	87·0	72·0	72	,,	,,
29	29·902	Calm	0·5	88·0	74·0	82	,,	,,
30	29·869	Calm	0·9	88·0	70·5	66	,,	,,
31	29·830	Calm	0·8	87·0	69·5	66	,,	,,
Mean	29·809	19 N 31°E	1·4	89·9	76·9	77	3	TOTAL 2·88

EDITOR'S NOTES.

Beef, Wine and Iron.

Mr. J. P. Street has been examining the various "beef, wine and iron" preparations, and reports (*Amjour. Pharm.*, August) that they are "nothing more than sherry wine of more or less questionable quality, to which has been added small quantities of meat extract and either tincture or citrate of iron." Their value approaches *nil.* The name, however, is very catchy.—The *Homœopathic Recorder*, October, 1908.

The Great Germ Killer.

At the same meeting Dr. H. E. Jones, of Roanoke asserted that mercury is a specific, not only for syphilis, "but for every other disease caused by a living organism." If this is so, and as all diseases are germ diseases, and, as, presumably, all germs are "living organisms," what is there left for physicians to do? Let the world take mercury and be healed. In the imminent medical cataclysm the surgeon is the only one who will escape, for it has not yet been discovered by the medical scientist that broken bones are a germ disase even if the Christiana scientist has discovered that it is but imagination. Between these two scientists the poor doctor seems to be in a bad way. But let him take heart, for there are still a goodly number of the unscientific who think they need him, even if, from the scientist's point of view, they don't.—The *Homœopathic Recorder*, December 15, 1908.

"Millions" and Malaria.

"Millions" are little fresh water fish from Barbadoes, a large number of which have been presented by Mr. C. K. Gibbons to the London Zoological Gardens; they are of special interest because of their proposed action in preventing malaria. This disease is much less common in Barbadoes than in other West Indian Islands, and it has been suggested that this freedom is due to the presence of enormous quantities of "millions" in the fresh water pools. These little fish are very voracious and destroy large numbers of the anopheles larvae. The males are about one-half inch long, with brilliant iridescent colors and large black spots on the sides. The females are much larger and not nearly so highly colored. Experiments are intended with the introduction of these fish into tropical countries where malaria is prevalent. It is stated that, on the initiative of the King of Italy, large numbers of "millions" are being introduced into that country, and that their effect in destroying malaria bearing mosquitoes is to be carefully tested.—*Medical Times*, October, 1908.

Natrum Muriaticum in Ague.

Dr. W. J. Hawkes points out that the chief indications for natrum muriaticum in ague are terrific headache and craving for salt. The chill comes on at 9 to 10 a.m. every alternate day, accompanied with a terrific headache. A patient, whose case is recorded, had one chill only after the 200th attenuation was administered.—The *Journal of the British Homœopathic Society*, October 1908.

Characteristics of Natrums.

In one of his interesting lectures Dr. C. M. Boger gives the following comparison of the characteristics of the natrums: *Natrum mur.*—sadness, worse from consolation; fever blisters; craves salt; dryness, constipation, periodicity, especially 10 a.m.; pyrexia with head symptoms; hot during menses; borders, especially of hair. Aggravation heat and light. Amelioration: pressure against back. *Natrum carb.*—feeble, but impressionable: indigestion, intolerance of milk; pyrexia with mental symptoms. Aggravation: open air, exertion during menses. Amelioration: eating, boring into nose. *Natrum phos.*—general acidity; cheeks alternately red; increased mucous secretions; deep yellow creamy coatings about base of tongue; loose, lumpy stools. Aggravation: light and heat. *Natrum sulph.*—head symptoms, especially from injury; liver symptoms, lying on left side; noisy, watery stools after rising; cough compels holding of sides; chilly during menses. Aggravation: dampness, light, heat. Amelioration: open air.—The *Journal of the British Homœopathic Society*, October 1908.

Is a Doctor a Workman ?

This question has just been decided by the Court of Appeal in Dublin, under the following circumstances. Dr. Murphy, dispensary medical officer in the Enniscorthy Union, while on his way to visit a pauper patient, was thrown from his trap and killed. His widow brought an action for damages under the Workmen's Compensation Act, and Country Court Judge Barry awarded her £300 Compensation. Against this the guardians appealed, and the Court upheld the appeal. The case is one of extreme importance, which might with great advantage be carried further. A dispensary medical officer is a paid servant of the guardians, and, if he loses his life, or is maimed in the discharge of his duty, it seems reasonable that there should be some means of recovering damages.—The *British Medical Journal*, November 14, 1908.

Vaccininum and Homœopathy.

The following letter from Dr. Phelps published in the December number of "*The Homeopathic World*" shows the relation of vaccination to small-pox and it proves that Vaccination does not protect at all.

To the Editor of the Homeopathic World.

Sir,—In the interesting account of the "Victory in Iowa," which Dr. John H. Clarke gave in his presidential address to the Cooper Club, he refers to the "weak point" of our position as antivaccinists, namely, our opinion that vaccination does not protect from small-pox. In this he thinks us wrong. It seems worth while to consider what may be said on our side. The following appear to be points to be weighed :—

1. If vaccination protects from small-pox, then it follows that when it is least prevalent there should be more small-pox. The reverse is proved by the Registrar-General's statistics. There are now in England and Wales millions of unvaccinated children. There never has been less small-pox.

2. If it be urged that a severe outbreak of small-pox will sooner or later occur as a penalty for the neglect of vaccination, then attention is drawn to the control experiment carried on for so many years at Leicester. There are 60,000 unvaccinated children in the town, which has been threatened for years with punitive small-pox for its contumacy in rejecting vaccination. When every one was vaccinated

there, they suffered severely from small-pox. Since they abolished vaccination small-pox has been brought into the town occasionally by vaccinated persons, but in each case it has been easily stopped.

3. If vaccination protects, then all epidemics should begin with unvaccinated persons. The reverse is notoriously the case; almost all epidemics begin with vaccinated persons.

Vaccination by scarification does not protect; does it protect under the homeopathic law, when a virus, alleged to be vaccine, is triturated, or otherwise potentised and the product is given by the stomach? Vaccinia used to be syphilitic, and is now mostly variolous in origin. If Dr. Clarke will refer to *Cowpox and Vaccinal Syphilis*, by Dr. Charles Creighton, he will, I think, acknowledge that syphilitic virus is in no sense "similar" to smallpox, but belongs to a different class of diseases altogether. But if he accepts the modern reversion to pre-Jennerian theory and practice, and founds on vaccine derived from variolous matter, then he is advocating the use, not of a *simile*, but of the *idem*. In neither case can his prescription be looked upon as homeopathy.

When snake-poisons are attenuated "into high infinitesimals," the attenuator is dealing with definite matrices. But when he comes to vaccine he is acting upon a substance which has never yet been defined, which sometimes is derived from one matrix, and sometimes from another, but always ambiguous. Homeopathy has need to act with scientific precision. It should be careful how it links itself to doubtful empiricism.

I am, faithfully yours,
A. Phelps.

Forty-five valuable Rubrics in Pneumonia.

The first remedies mentioned under each symptom are considered the most important:

1.—*Sharp stitching pains on inspiration*:—bryonia, phosphorus, scilla, kali carb., bovista, ferrum phos., hyoscyamus, kreosote, mercurious, pulsatilla, natrum mur.

2.—*Can lie only on back, for sharp pains*:—phosphorus, bryonia, aconite.

3.—*Sharp pains on coughing*:—bryonia, phosphorus, belladonna, kali carb., drosera, squilla, aconite, mercurious, iodine.

4.—*Sensation of tightness in chest*:—phosphorus, sulphur, aconite, causticum, bryonia, arsenicum.

5.—*Dry cough* :—bryonia, phosphorus, aconite, spongia, hyoscyamus, pulsatilla, rumex, arsenicum, sanguinaria.

6.—*Rattling cough* :—antimonium tart., ipecacuanha, belladonna, sulphur, (with nausea and vomiting, ipecacuanha especially.)

7.—*Suffocative cough* :—antimonium tart., ipecacuanha, cuprum, sulphur, drosera, nux vomica, china.

8.—*Scanty expectoration* :—phosphorus, pulsatilla, stannum, bry.

9.—*Expectoration tenacious and hard to raise* :—kali bichromicum, phosphorus, stannum, bryonia, aconite.

10.—*Expectoration yellow* :—phosphorus, pulsatilla, calcarea carb., silicea, stannum, sulphur, bryoni, aconite, spongia.

11.—*Expectoration rusty colored* :—bryonia, phosphorus, sanguinaria, rhus tox., squilla, aconite.

12.—*Expectoration bloody* :—ipecacuanha, phosphorus, ferrum, ferrum phos., belladonna, arnica, aconite, bryonia, hyoscyamus, pulsatilla, sulphur.

13.—*Expectoration tastes salty* :—arsenicum, lycopodium, phosphorus, pulsatilla, stannum, colchicum, china.

14.—*Expectoration tastes bitter* :—pulsatilla, arsenicum, drosera, chamomilla, mercurius, nux vomica.

15.—*Expectoration tastes sweet* :—phosphorus, pulsatilla, calcarea, stannum.

16.—*Hot, dry skin* :—bryonia, phosphorus, arsenicum, aconite, calcarea, sulphur, chininum, stannum, nux vomica, lycopodium, stramonium.

17.—*Fan-like motion of alæ nasi* :—lycopodium, antimonium tart., phosphorus, sulphur, kreosote, ipecacuanha.

18.—*Dilation of alæ nais* :—antimonium tart., spongia, arsenicum, ferrum phos., ipecacuanha.

19.—*Cyanosis* :—antimonium tart., lachesis, ipecacuanha, laurocerasus, digitalis, bovista.

20.—*Herpes on lips and about mouth* :—natrum muriaticum, rhus tox., sepia, hepar, sulphur, calcarea, arsenicum, bovista.

21.—*Albumin in urine* :—arsenicum, apis, lycopodium, calcarea terebinthina, helleborus, phosphorus, mercurious, corr., aurum mur., natrum carb., lacdefloratum, antimonium tart., dulcamara, china.

22.—*Scanty, high-colored urine* :—arsenicum, apis, digitalis, mercurius, terebinthina, sepia, aconite, bryonia, antimonium tart., sulphur, nux vomica.

23.—*Hypermia of lung tissue*:—aconite, bryonia, phosphorus, belladonna, ferrum phos., camphor, rhus tox., terebinthina, spongia, lachesis, sulphur, gelsemium, china, digitalis, sepia, calcarea, ipecacuanha.

24.—*Emphysema*:—Antimonium tart., hepar sulph., lachesis, phosphorus, lobelia, arsenicum, belladonna, carbo veg., mercurious, ipecacuanha, camphor, natrum muriaticum.

25.—*Empyema*:—arsenicum, calcarea, silicea, phosphorus, mercurius, hepar, sulphur, lachesis, kali-carb., china.

26.—*Gangrene of lungs*:—arsenicum, kreosote, phosphorus, carbo.a., china.

27.—*Hypertrophy of the heart*:—kalmia, carbo, phosphorus, spongia, kali-carb., aconite, digitalis, arsenicum, lachesis, spigelia, pulsatilla, naja, glonoin, iodium.

28.—*Pulmonary edema*:—arsenicum, antimonium tart., lachesis, apis, phosphorus, mercurius, digitalis, ammonium-carb., carbo-veg., ipecacuanha, hyoscyamus.

29.—*Paralysis of lungs*:—lachesis, antimonium tart., lycopodium, carbo-veg., phosphorus, stannum, calcarea, arsenicum, baryta carb., gelsemium, cuprum, ammonium mur.

30.—*Suppuration of Lungs*:—Calcarea, hepar, silicea, phosphorus, sulphur, lachesis, mercurius, pulsatilla, kali-carb., lycopodium, psorinum, ledum.

31.—*Endo carditis*:—kalmia, spigelia, arsenicum, aconite, bryonia, cactus grand., phosphorus, spongia, calcarea, kali-carb., lachesis, colchicum, aurum.

32.—*Pericarditis*:—arsenicum, spigelia, aconite, kalmia, sulphur, bryonia, apis, antimonium tart., cimicif., lachesis, spongia, digitalis, kali-carb., colchicum.

33.—*Cerebral irritation in pneumonia*:—belladonna, phosphorus, rhus tox., hyoscyamus, arsenicum, veratrum viride, stramonium, lycopodium, cimicifuga, aconite, calc.

34.—*Muttering delirium*:—hyoscyamus, lachesis, stramonium, belladonna, apis, phosphorus, hepar sulphur, rhus tox.

35.—*Wants to be naked.*—hyoscyamus, phosphorus, secale, belladonna.

36.—*Religious affections*:—hyoscyamus lachesis, sulphur, veratrum, belladonna, calcarea, arsenicum, pulsatilla, lilium tig., sepia, stramonium, carbo veg.

37.—*Talks to himself*:—antimonium tart., hyoscyamus, calcarea, kali-bi, apis, belladonna, rhus tox.

38.—*Fear of death*:—aconite, arsenicum, calcarea, phosphorus, gelsemium, belladonna, bryonia, rhus tox., pulsatilla, kali-carb., nux vomica, nitric acid.

39.—*Predicts the time of death*:—Aconite, argentum nit.

40.—*Wants to get out of bed and escape*:—belladonna, bryonia, arsenicum, hyoscyamus, stramonium, arsenic, zincum, phosphorus, aconite, crotalus horr.

41.—*Sees devils and horrid objects*:—belladonna, pulsatilla, lachesis, hyoscyamus, platina, arsenicum, stramonium, kali-carb.

42.—*Thinks he is double*:—stramonium, anacardium, petroleum, baptisia, glonoin, lilium tig., secale, cannabis indica.

43.—*Sees faces on closing the eyes*:—calcarea, belladonna, bryonia, arsenicum, argentum nit., carbo-veg-, china, sambucus.

DD.—*Sees insects*:—arsenicum, belladonna, stramonium, phosphorus, hyoscyamus, pulsatilla.

45.—*Typhoid pneumonia*:—antimonium tart., bryonia, phosphorus, lycopodium, sulphur, rhus tox., sanguinaria, hyoscyamus, terebinthina, benzoic acid, laurocerasus.—*The North American Journal of Homœopathy*, November, 1908.

Honey as a Medicine.

In an article in the *Times* of April 24, on bee-keeping, occurs the following passage: "That honey is not only a very palatable, but also a most wholesome, article of diet might be shown from its chemical constituents, and from the special nature of the two sugars it contains. Moreover, its value as a remedial agent, especially in throat and bronchial troubles, is well known. This may be due not only to its emollient nature, but also, perhaps, to a fact of quite modern discovery. Most people imagine that the sting apparatus of the bee is solely to act as a weapon of offence and defence. The truth is that its primary use is widely different, viz., to inject into each filled cell of honey, before it is sealed, a minute drop from the 'poison bag.' The chief ingredient of the liquid is formic acid, which acts as an antiseptic, and prevents fermentation, which would otherwise occur in the honey. Possibly it is this very small, but powerful, element which has medical properties of an advantageous kind."

This shows that the bees have anticipated us in the use of food preservatives, and that when people take honey they also take apium virus in appreciable quantities, a fact to be borne in mind when we recommend honey as an article of diet.—The *British Homœopathic Review*, June, 1908.

Fresh air in the Treatment of Pneumonia.

In the *American Journal of the Medical Sciences* for November, Dr. G. W. Norris has reported good results from fresh air in the treatment of Pneumonia at the Philadelphia General Hospital, where the type of the disease is of unusual severity. Most of the patients are advanced in years and often suffer from arterio-sclerosis and chronic nephritis, and a large number of tramps and drunkards is also comprised. As might be expected, the mortality was high—53 per cent. before adoption of this treatment and 43 per cent. after its adoption. If the patients who died within the first 24 hours—i.e., were moribund on admission—be deducted the latter mortality was 38 per cent. Apart from the constantly open doors and windows no other innovation was made in the previous treatment. Dr. Norris observes that the use of alcohol is steadily falling more and more into disfavour, and justly so, since it does more to relax the vaso-motor system than to stimulate the heart, and that it has been shown by the researches of Paessler and Rolly that death in pneumonia is due to failure of this system. He admits, however, that habitual drunkards are often benefited by a reasonable amount of alcohol. Sponging with cold water was used frequently and with good results, not so much for the purpose of reducing the temperature, which it does satisfactorily, but with a view to increase the tone of the vasomotor system, for which purpose it seemed to be the most useful remedy. The value of fresh air is illustrated by the case of a big negro on the third day of an attack of pneumonia. In the general medical ward he was restless, feverish, and panting, the typical picture of the anguish so often seen in these cases. An hour later he was seen in the pneumonia ward to which he had been transferred. It was a cold March day and the doors and windows were wide open, so that a constant current of fresh cold air blew over the beds. The patient greeted Dr. Norris with a smile and said. "I feel like another man here."

It certainly requires, as Dr. Norris observes, some courage and persuasive power over the patient's relatives to adopt this treatment but once tried he is conceived that the practitioner will not abandon it. We may add that good results have been reported from the open-air treatment of pneumonia by another American writer, Dr Northrup, and also by Dr. G E. Rennie, in the Prince Alfred Hospital, Sydney. The last writer places his patients at once on the balcony or verandah of the hospital, where they are kept night and day. A screen is kept round the head of the bed to prevent the cold air from blowing directly on the patient. This seems to us a necessary precaution, for, however valuable fresh air may be, few will regard a draught as desirable in pneumonia. Dr. Rennie at first hesitated to adopt this method when complications such as bronchitis were present but even then he found it equally successful. In one case which he reports, a girl, aged 12 years, had marked dyspnœa and cyanosis and a temperature of nearly 104° F., a rapid weak pulse, and extensive labial herpes. There were signs of consolidation at both bases. She was inclined to be delirious and had not slept for two nights. She was placed on the balcony with a screen round her head. On the first night she slept well and improved much.—The *Lancet*, December 19, 1908.

Alcoholism—a Germ Disease.

At the last annual meeting of the Medical Society of Virginia, Dr. T. H. Crothers, of Hartford, Conn., is reported as saying that alcoholism is worse than syphilis, tuberculosis or any other germ disease; also: "Alcoholism is contagious, infectious and curable in the same sense as other disease, and it is always a medical problem and not a moral one. The present agitation by laymen, reformers and quacks is a startling reflection upon the stupidity of physicians, who, of all others, should teach the public and point out the means of cure and prevention." In the lexicon of modern scientific medicine is there any disease, moral or physical, that is not a "germ" disease? Apparently not. The logical outcome of this "science" must be that physicians are a useless set and the sick should be turned over to health boards and bacteriologists. According to these eminent scientists about all left for the physician is to "warn and instruct the public." Wonder how much longer such "science" will be accorded the leading place?—The *Homœopathic Recorder*, December 15, 1908.

Back to the Old Starting Point.

An estimable contemporary begins a note as follows: "Antityphoid inoculation, states Sanborn (*Bost. Med. and Surg. Jour.*, June 4, '08), are practicable," which statement is quite true, for inoculation is an old method of communicating disease. "Every person to be inoculated should have explained to him the symptoms that may follow; that a few hours of malaise will have to be endured. When we propose protective inoculations during an epidemic in persons possibly already exposed we must further explain the possibility of their being infected, and in the septicæmic stage before symptoms have developed, and the probability that if inoculated under these conditions a more serious attack may be brought on than would have followed naturally if there had been no inoculation; also the possiblility of infection immediately after inoculation during the period of depressed resistance (negative phase) when there would be an abnormal susceptibility to typhoid fever. Under such circumstances the course of the disease is usually mild."

All of the foregoing is on precisely the same basis that the old inoculation for small pox rested on, but it comes from very scientific sources. The old "dust heap" is being stirred up.—The *Homœopathic Recorder*, December 15, 1908.

CLINICAL RECORD.

Foreign.

CLINICAL CASES.

By Dr. Anderson Austin, Texas.

Mrs. C. R. K. 52 years of age; tall, dark, very slender. Comes to me for awful throbbing in the pit of the stomach—with sensation of a lump in the stomach; < morning, mental excitement, anger, summer. Cannot bear anything tight about the waist. Feels badly all the forenoon; generally > in the evening. Extremely irritable; cannot bear contradiction; easily excited.

Burning of the back of the hands and wrists, always < in the summer, entirely relieved in the winter or by bathing them in cold water.

Very little perspiration; urine scanty.

Bowels regular.

Wakens often about 2 A. M., and lies awake; awakens easily from slight noise. Drowsy during the day.

Sensitive to cold and easily chilled, but always feels < in the summer time.

July 3. Nux vom. cm., 3 powders and Sac. lac.

July 10. Reports improvement; Sac. lac.

July 17-24. Improvement continues: appetite improved; burning hands >; no throbbing in abdomen; sleeps better.

Aug. 1. Last night became angry and indignant over some social matter; couldn't sleep; this morning stomach pains and throbs; hands burn and feel terrible. Nux vom. cm., ten powders to be taken one hour apart until relieved, then Sac. lac.

Aug. 7. Reports entire relief after six powders. "The powders helped her very much."

Aug. 21. Improvement continues.

Sept. 7. Is feeling very well and says she needs no more medicine.

Mr. L. C. Age 55.

Aug. 24. Was called to see Mr. C. at 2 P. M. Says he returned last night from a trip down the coast and was feeling badly. This morning at about 10 o'clock he was suddenly taken with a severe chill. Began in hands and feet which felt like ice; extended all over the body with shaking; no thirst and no headache. Lasted until 12·30, followed by high fever with slight thirst and desire to be uncovered; yawning and stretching; no headache or pain.

Gave Sac. lac. and three powders Nat mur. 20m to be taken one hour apart, beginning at six o'clock.

Aug. 25, 3 P. M. Called at the office and reported a profuse sweat during the night. Feels better to-day; no chill. Sac. lac.

Aug. 30. Reports that he has had no more chills and is feeling fine.

Mr. F. G. H. Was called to see him at 6 A. M. Found him suffering from severe pain in the region of the right kidney extending around and down the toward the bladder, slightly < after passing urine—pain severe, sharp, cutting. Abdomen bloated, sour eructations. Has had three attacks before, but never so severe. Had earlier in the morning taken a hot bath for half an hour without relief.

Dissolved a powder of Lyc. 30 in 1-3 glass of hot water. Left directions to take a teaspoonful every 10 minutes until better, then at longer intervals.

Next day he reported that the pain was entirely relieved after the third dose. Gave one powder Lyc. m and now after five months he reports that he has had no attacks since.

Johnnie C., 7 years old. Is brought by his mother. I smell him as soon as he comes in the room. The mother reports that for nearly a year he has been unable to retain his urine. No kind of treatment has done any good. On examination I find the parts red and inflamed and his legs look as though they had been scalded as far down as the knees.

Gave Sulph 30 one powder and Sac. lac. ad. lib.

A week later he came to the office with glowing face and said: "I'm all right now. I don't leak at all any more." Six of Sulph. 30 did it. What could the old school do with such a case?—The *Medical Advance*, November, 1908.

CASES FROM MY NOTE BOOK.

By J. C. Roberts, Barbados, W. I.

Case I. Cina. A girl, four years of age, had large abdomen and very thin legs. Spent most of the day in lying across a chair as if she experienced relief having the abdomen in contact with the chair. Temperature above normal. Complained during the day from the heat of the sun, although the weather might be of the most agreeable character. The little thing when aroused would rise up from the chair and say "sun too hot." There was more or less cutting and pain in the abdomen, with slipping down of the anus when at stool. Cina 3x, continued for some time, produced a perfect cure, and the child is now a jolly-looking creature with well developed limbs, enjoying perfect health, and dreads nothing in the shape of weather.

Case. II. Alumina. A boy about 16 years old was brought to me four years ago by a friend of his mother's, and I was told that his mother had been watching his case for some time and trying all kinds of domestic remedies, but to no purpose. His trouble was severe pain in the lower abdominal region every month, which seemed to be governed by the phases of the moon. His case resembled that of a girl with menstrual trouble, and was of a few years' standing. So said the individual who accompanied him. I was also told that his mother had grown anxious about his condition because he had reached an age when he should be apprenticed to some tradesman, and she did not care to send him to work as long as he suffered from these peculiar pains. I prescribed Alumina 6x. He has never since suffered another attack.

Case VI. Bacilinum. A young woman of 19 summers developed ringworm, which made its first appearance on one of the arms. All domestic treatments recommended by friends failed. The victim did not believe in Homœopathy. She consulted the most popular allopath in Bridgetown, who prescribed a parasiticide and an ointment. After a time the ringworm disappeared from the arm but reappeared on the back with greater vigor and then under the arm pit.

After chasing it from place to place with the lotion and ointment, it started to duplicate itself. Eventually a large ring appeared between the thighs and extended to the pudeda. The parts involved were so tender that she got about the house with great difficulty.

Having reached such a bad stage under the treatment of a supposed skilled physician, she decided to try another allopath. At this stage I tried to persuade her against allopathic treatment which I described as wrong and dangerous, but she had seen my globules and small vials of tinctures and they were too insignificant to impress her that they were capable of curing a disease that had resisted such powerful remedies as the allopath had prescribed. However, to prove it to me she consented to try one of my remedies. I prescribed Tellurium, but it was not the magician's wand, and in a couple of days she was ready to break away.

I willingly consented to a return to allopathic treatment, and another allopath was called in—one of the oldest practitioners of the city. This physician has a splendid reputation as an allopath, and is recognized by the whole profession as a skilled Surgeon. He thought no more seriously of the disease than his younger confrére. He sat on the bed-side and delivered a short lecture on the disease and its cause. The laundress was blamed for it; she, he said, had brought in the parasite on the clothes. He gave his word that he would destroy the fungi in a very short time, as he had often done before, and that the patient would soon be restored to perfect health. All this was said within my hearing. His treatment was of a rather elaborate character, and consisted not only of the use of a parasiticide and an ointment, but of the regular boiling of the clothing in a vessel secured for that purpose. "Unless you boil the garments," he said, "you will never get rid of the fungi," Internal treatment he declared to be absolutely useless, and was absurd besides. His instructions were carried out in every detail, but, like the previous treatment, it drove the ringworm off, only to take up its position in another part of the body, and although the treatment was kept up for a considerable time the ringworm could not be prevented from reappearing. At last she gave up all hope of ever curing the disease which had now become the terror of her life, and consented to give Homeopathy a fair trial.

Now, thought I, my chance has come. I decided to give her the indicated remedy or rather the constitutional treatment in the form of "spider eggs" as one of the leading allopathic practitioners of my city once disparagingly described our globules to a patient who ventured to make reference. I placed on her tongue a half dozen globules (No. 85 B. & T.) from a vial saturated some days before with Bacilinum 30. I repeated the dose three or four times at intervals of several days, and then I gave a couple of doses at intervals of several weeks. The ringworm gradually faded and finally disappeared sometimes after the last dose of Bacilinum had been taken. It is now nearly two years; and there is no sign of the return of the trouble.

No one who has studied Homeopathy can possibly believe that the external treatment of ringworm is right. Such treatment can only deal with external manifestations of the internal organismic ailment. "Ringworm," as Dr. Burnett says, "is an internal disease of the organism having for its outward sign the ringworm consisting of fungi thriving in a certain order; the fungi are the guests of the diseased host; cure the host's diseased state, and the fungus—the ringworm—dies off from lack of a proper medium."—The *Medical Advance*, December, 1908.

SILICA MARINA IN CONSTIPATION.

BY E. CRONIN LOWE, M.B., B.S.

CASE 1.—Mrs. M. P., aged 36. Constipated for years, usually going three or four days without deæcation; has taken numerous purgative pills, now takes mostly cascara "tabloids," two or three every third night. Motion is hard, lumpy, difficult, usually light-coloured, bringing down piles which rarely bleed, but accompanied by burning left-sided pain. Rather sallow lax skin, with morning headache lasting on into afternoon. Very nervous disposition. *Sil. mar.* 3x. was commenced night and morning. The first week made no progress, *cascara* being used twice. At the end of second week two unaided motions had occurred; *casc.* used only once, powders taken at nights only. End of third week, *casc.* once used, motion so far easier, no piles protrude, headache much better. End of fifth week, powders taken every other night, bowels act by themselves about every other day; easy motion, no straining. End of eighth week, powders taken twice weekly; still keeps free from constipation; has forgotten powders once or twice.

CASE 2.—Miss L. T., aged 22. A mill hand. Two fingers of one hand became septic through injury at work, and have remained so chronically some weeks. Very anæmic, with a good deal of gastralgia, flatulency, palpitation, morning headache, hæmorrhagia. Chronic constipation for several years, with the usual history of numerous purgatives tried, *Sil mar.* 3x. given every night. The first week gave very little result; the favourite purgative was allowed if necessary, but the motion was reported easier, softer, and less painful. After six weeks of patient persistence with the nightly powders, which were repeated less frequently during the last week, it was found that no purgative had been used for three weeks, and that the motions were easy and of daily occurrence, and the general tone greatly improved. Four weeks later, reported doing excellently.

CASE 3.—Mrs. A. R., aged 38. Old troublesome constipation, with hard, difficult stool, often partially evacuated and then receding, accompanied with piles, acne facialis, and sallow complexion, profuse menstrual period, and constant morning beating headache. *Sil. mar.* 3x. was given and as in the other cases, no purgative was used, but the occasional use of a warm soap-and-water enema was found necessary on four occasions during the first three weeks, and after nine weeks' course of *sil. mar.* 3x. decreasing in frequency from once daily at first to once weekly, she reports a daily evacuation of a normally formed motion with no discomfort. Her acne and headache gone, and general tone improved.

Case 4.—Mrs. M. R., aged 41. Constantly goes five days without motion; acute flatulence < directly after meals, great distress and lassitude in arms, with occipital headache rising forward over head to eyes. *Lycopod.* 30 *o. m.* was given. Next week: flatulence >, constipation same. *Lycopod.* 30 rep. End of second week: no improvement. *Sil. mar.* 3x. given *om. noct.* End of third week: stomach much >, constipation not altered. End of fourth week: one natural motion during the week, purgatives used twice. End of sixth week: a fairly easy motion almost every other day. *Sil. mar.* 3x. every other night. Since then she has not been seen, so one cannot say whether she continues to be relieved.

Case 5.—Bessie B., aged 3. A backward child, with adenoids and enlarged tonsils and exceptionally bad constipation—going a whole week without motion, and needing manual assistance. Motion very hard, broken, and light-coloured. A thin, pale child, sweating at night, and poor appetite. She had *calc. phos.*, *sil.*, *sulph.*, *nux vom.*, *bryon.*, *graph. phos.*, in high and low potencies, but without any relief during a period of two or three months. *Sil. mar.* 3x. *om. noct.* was then given, and after ten weeks she is now much improved.—The *British Homœopathic Review,* December, 1908.

A CASE SHOWING THE VALUE OF "OBJECTIVE SYMPTOMS" AND OF "DIAGNOSIS."

By Richard Koch, M.D.

Mr. I. (aged 34, married, tall and slender, dark complexion, of lymphatic, torpid temperament) sent for me on June 7, 1867, for the first time. I found him as if he had just recovered from a fit of epilepsy. From himself and through his wife I gathered the following history and symptoms.

For six years he has suffered, almost daily, attacks of indescribable sudden debility, commencing with a chilly and creeping sensation in the right leg, travelling slowly upward to the chest, together with profuse perspiration on the head; suddenly, and soon after, a feeling of weakness, which the patient describes with the words, "as if I were dying," comes over him, with trembling of the limbs, so that he is unable to stand or sit, and had frequently to be brought home in a carriage. The consciousness is, however, retained. This attack of debility lasts about two to three hours, when strength gradually returns, coupled with a dull, pressing headache about the vertex, which latter continues for some hours.

A physical examination of the chest showed a large heart with thick walls and an insufficient closure of the mitral valves, the regurgitation of blood being distinctly audible. The pulse was then, as it has ever since been, quick, hard, full and intermitting every sixth or seventh beat. He acknowledged to be always worse in the summer, after cooling rains, and felt the attack come on more frequently after bodily exertions and walking. Otherwise he complained of nothing, but was very low-spirited, because he had been unable to attend to his business as a merchant for years, and his means of support were gradually, but steadily diminishing.

Not being able to trace all the symptoms to the heart diseases, and noticing a roughness of the skin on the forehead, I inquired whether he ever had any breaking out on his skin. Upon this I learned that he had about every four months a scabby eruption, moist at the base and of a yellowish colour, on the scalp and fore head, as far down as the eyes, and sometimes on the chest. By the description I supposed it to have been eczema. This disease the patient thought he always cured in six weeks with an ointment that looked to me like *binoxide of mercury.* Knowing the small chance I had of *curing* the disease of the heart, the treatment was now quickly decided upon by ignoring this organ almost entirely. *Hepar sulphuris calc.* 3, was left, with orders to give three powders a day.

June 9, or two days afterwards, he reported that he never felt better, and that he had no attack yesterday. Continued *hepar* 3, morning and evening.

June 16.—Continues to feel well and has no attack since *Hepar* 3 every morning.

June 29.—Well. Discharged as cured, except his organic disease of the heart. The pulse remains hard, full, and eighty-four beats per minute. I have frequently seen him since; he has now no more attacks, nor any eruptions on the head.

I desire to bring this case before the profession, not alone on account of the remarkable results of *hepar,* but also to show how often it is necessary to look for the remotest causes of a complaint, how important objective symptoms sometimes are, and how useful a diagnosis is also to a homœopath.

I am convinced that, with the heart disease alone, the patient would not have had these symptoms, or else he would have them yet; nor would the eruption itself have brought out just these signs, had not the patient had the heart disease. The latter was the organic and the former the constitutional cause, and both together produced this curious state of symptoms.

It would be well if, in the proving of remedies also, such circumstances were taken more into account.

The characteristics which induced me to choose *hepar* were :—

(1) *The moist skin eruption forming into scabs.*

(2) The chilly sensation creeping gradually all over the body.

(3) The perspiration on the head.

(4) The sudden weakness with trembling of extremities.

(5) The pressing headache on the vertex.

(6) *Hepar* is one of the most important antidotes to *mercury*, particularly to the *oxide*.—The *British Homœopathic Review*, June, 1908.

Gleanings from Contemporary Literature.

THE RELATION OF GALEN TO THE PHILOSOPHY OF HIS TIME.

THE wonderful medical system of the great physician of Pergamos which dominated the civilized world for some fourteen centuries was no exception to the rule that medicine, like the other arts, reflects the mental temper of its time. To the student of medical history it must, at first sight, be a matter of no small astonishment that a single man, who was admittedly not of transcendent genius, should have remained an absolute dictator in the medical world for so long a period, particularly when many of his statements would seem to be especially easy of disproof. It is therefore worth while inquiring what were the intellectual forces which moulded the mind of Galen and what were the circumstances which contributed to giving him this extraordinary pre-eminence.

Born at Pergamos (A.D. 131), we are told that he had a most complete and elaborate education. At the age of 14 he began to attend the various schools of philosophy in his native city. Here he became initiated into the idealism of Plato, the realism of Aristotle, the scepticism of the Epicureans, and the materialism of the Stoics.

This education continued for the space of three years, and thus was laid a broad philosophic basis for his future intellectual development. On this basis of philosophy his later medical studies were built up, and every part of the superstructure remained in intimate relation with the foundation. At the age of 17 his father, Nicon, who was an architect and a very learned man, decided in consequence of a dream that his gifted son should enter the profession of medicine. Accordingly young Galen was handed over to the most distinguished teachers of the medical art. In spite, however, of the ability of individual teachers, the whole condition of medicine was in a state of hopeless chaos. The various schools which had sprung up after the death of Hippocrates were more intent upon scoring verbal triumphs over their opponents than upon either advancing medical science or curing their patients. Of these schools—namely, the Dogmatists, Empirics, and Methodists—we have given some account in a previous article. But in Galen's time there had also developed a school of Eclectics and of Pneumatists; the latter were, in fact, a further extension of the Dogmatists, and so tenaciously did they hold their opinions that it was said they would rather betray their country than renounce their theories. Galen determined not to indentify himself with any of these conflicting systems, but set himself the task of attempting some kind of unification of them all. As a philosopher, the Empirical school with its negation of knowledge could have little attraction for him; the Methodists with their crude applications of epicureanism to medicine were still more repugnant, and Galen was never tired of fulminating against them. It was, then, with the Dogmatists and Pneumatists that he found himself most in harmony, for their systems did at least permit medicine to be rational.

The first important reform which Galen effected was the assertion of the importance of anatomy in contradistinction to the prevailing doctrines of the Methodists and Empirics, according to which it was entirely superfluous. He saw the obvious absurdity of attempting to have any sound knowledge of disease without knowledge of the structure of the human body. The necessity of studying anatomy he further emphasized by his numerous dissections and anatomical descriptions. He was the first to describe the platysma, interossei, and popliteus muscles, also the "ductus arteriosus" and the three coats of the arteries. If nothing else had come down to us but his anatomical studies he would still take a high place in the history of medicine. Without entering further upon this part of his work, it is sufficient to say that most of the anatomical errors for which he was attacked by Vesalius and the modern anatomists arose not from mistaken observations, but from the fact that all his dissections were made on animals, the dissection of the human body being then impossible. Galen imagined that what was true of animals in the matter of anatomical structure would be equally true of man ; this was the source of most of his mistakes.

Passing next to physiology, he stands out as the first experimental physiologist in the history of medicine. He was the first to demonstrate that the arteries contained blood and not air, and his work on the nervous system, in which he distinguished between sensory, motor, and mixed nerve trunks, is a model of scientific excellence.

These researches in physiology and anatomy would cause Galen's reputation with the modern world to stand much higher were it not that they were so closely interwoven with his philosophical speculations. On the other hand, the enormous influence which he began to wield over the civilized world some thirty years after his death cannot be attributed to his scientific works alone ; it was much rather by his philosophical writings, which to the modern world seem foolishness and an impediment to true knowledge, that he attained to his extraordinary position of eminence in the Middle Ages.

As has been shown in a previous article, one of Hippocrates's chief titles to fame is that he separated medicine from philosophy, and Galen in the main took Hippocrates for his pattern and master. He wrote commentaries with warm approval on nearly all his works, accepted his humoral pathology, and to a large extent his therapeutics.

With regard to philosophy, however, though it would not be fair to say that he reversed the process of Hippocrates, he certainly endeavoured to bring it into closer harmony with medicine. In attempting this he was doubtless influenced by his early education and by the high estimation in which philosophy was held, for there were already several well-established philosophical systems in existence which have become famous for all time. Just as from time to time in the world's history there have been men who aimed at bringing religion into closer touch with the scientific and philosophic thought of the day, so Galen seems to have been desirous of carrying his own special art into a higher region on the wings of philosophical speculation.

In philosophy Galen was to some extent an eclectic; in early life he tells us that he had natural leanings to the sceptics, perhaps the form of philosophy most attractive to early youth; from this he tells us he was preserved by his natural good sense and his love of geometrical demonstrations; at the same early period his unusual precocity led him to write a commentary on the dialectics of the Stoic Chrysippus.

But undoubtedly the philosopher who had the greatest influence upon him was Aristotle, and these two names were continually coupled together throughout the Middle Ages. This influence was two-fold: in the first place it made Galen aspire to occupy the same position of legislative authority in the region of medicine which Aristotle held in the whole sphere of human knowledge. Secondly, he adopted from Aristotle certain definite principles which had a most direct bearing upon his work. Of these principles the most important was the doctrine of final causes. "Nature makes nothing in vain" had been the *ex cathedrâ* statement of Aristotle, in which, indeed, he was only following the firm belief of Plato. Convinced of the wisdom of these two great philosophers in all matters, Galen regarded this unproved statement as a law of the universe, and proceeded to show that every structure and function of the human body subserved some profound end—that, in fact, the aim or object of any structure was the cause of its existence. For instance, Aristotle and Galen said that man has hands because he is the wisest of animals; whereas the earlier philosopher, Anaxagoras, more in accordance with the spirit of modern science, had said that man was the wisest of animals because he had hands. Galen was never tired of bursting forth into paeans of praise of the Creator for His profound wisdom in the construction of the universe: "The Father of all Nature has shown His goodness in providing wisely for the happiness of all His creatures in assigning to each what could be really useful to it. Let us then magnify Him by hymns and psalms. He has shown His infinite wisdom for arriving at His beneficent ends, He has given proof of His omnipotence in creating everything in perfect conformity with its destiny. It is thus that His will has been accomplished." In his work *De usu partium* he endeavours to prove that all the parts of the body have been well constructed, and in such exact relation with the functions they have to perform, that it is impossible to conceive any better arrangements; anatomy and physiology simply appear as two methods which lead to the proof of the wisdom of Nature. This unfortunate doctrine that Nature makes nothing in vain, inevitably withdraws the mind from the sober investigation of facts and induces it to accept arbitrary solutions of scientific questions in order to establish the theory. The absurdity of trying to discover the functions of an organ from its structure is at once seen if we ask ourselves how it would be possible to deduce the functions of liver, spleen or pancreas from their structure.

In describing the hand Galen says that the muscles and tendons of it are marvellously arranged in number, form and strength so as to fulfil all the functions with which it is entrusted, and that the Creator could not conceive an instrument of greater perfection; nothing is wanting and nothing could be added to improve it. This is the clearest evidence of the supreme wisodm. What is our astonishment after this panegyric to discover that Galen has all the time been describing the hand of an ape, which, by lacking the opponens policis muscle, is quite incapable of executing the various functions of the human hand? Again, he calls us to obseave the great wisdom of Nature in having provided the brain with two coverings for its protection—not with one only, nor with more than two—because the brain and the skull being substances of an opposite character, Nature inserts between them two membranes, which are of an exactly intermediate texture between the hardness of the skull and the softness of the brain. But what are we to say about the supreme wisdom of Nature when a third membrane—the arachnoid—is discovered? The result of this teleological reasoning is to make the wisdom of God depend on the fallible investigations of man; since, if we make belief in the wisdom of God depend on the supposed adoption of organs to functions, what was true yesterday may become false to-day, and so divine wisdom becomes dependent on human knowledge.

Fortunately for physiology, he did not follow Aristotle in his views of sensation. The latter regarded the heart as the seat of the sensitive soul and the brain as of secondary importance, because it was the coldest part of the body, being devoid of blood, and having for its chief or only function the cooling of the heart. Into this great error Aristotle had been led by his metaphysical notion that the sensitive soul was indissolubly connected with heart, and therefore could not have its seat in the coldest region of the body.

By a lucky chance Galen inverted this view, and by taking the brain as the seat of sensation was enabled to make his valuable discoveries in the nervous system. On questions of ethics he agreed with Aristotle in regarding virtue as a mean between two extremes. He was also influenced by the categories of Aristotle, and accepted his doctrine of the four causes. But in many minor matters Galen often found himself at variance with the peripatetic school of Aristotle, and complained that, though they discoursed about anatomy, he could not persuade them to dissect and so have ocular demonstration of his anatomical descriptions.

The influence of Plato upon Galen was only less than that of Aristotle. He adopted the Platonic tripartite division of the soul, in accordance with which the soul in its rational aspect had its seat in the brain, in its aspect of courage in the heart, and in its aspect of desire in the liver. To the four causes of Aristotle he also added a fifth which seems to show the influence of the platonic ideas. He wrote a commentary on the Timaeus and expended much energy in trying to prove the agreement between Plato and Hippocrates and uniting them both in substantial harmony with Aristotle. Plato probably affected Galen more by the general spirit and temper of his writings than by any specific doctrines. Certain tracts of mysticism; the belief that some truths are immediately clear to the intelligence without the intervention of the senses; the following outbursts of praise in honour of the Creator—"True piety does not consist in sacrificing hecatombs or in burning a thousand precious perfumes in His honour, but in rocognizing and proclaiming aloud His wisdom, His omnipotence, His love and His goodness," all seem to have the Platonic ring.

As to the popular philosophies of the day, his antagonism to the sceptics and Epicureans as exemplified in the doctrine of the Methodists was very pronounced. With stoicism, which was then fashionable in court circles owing to Marcus Aurelius, he was much more in sympathy, and some of his doctrines seem based on that philosophy. Thus he adopted their doctrine of the "Pneuma," which in some Stoical writers appears to be synonymous with the deity; it seems in fact to be the soul of the universe, and related to the world as the soul is to the body of man. "The force of the soul is due to the Pneuma, which is carried to the brain with the blood after having been prepared by the vital spirits." This explains why changes in the soul follow on general changes of the body, and why all opinions are the result of our physical condition. As expressed by Athenaeus one of the leading members of the Pneumatist school, which Galen was inclined to favour, "The Pneuma is the world soul, the living self-conscious god, from whom the souls of men, animals, and plants emanate, also the maker and fashioner of all matter." The health as well as the disease of the body was determined by the Pneuma; it was supposed to pass from the lungs to the heart, and then to be spread all over the body by means of the arteries. The pulse was thought to be due to an automatic movement of dilatation on the part of the Pneuma contained in the arteries. On the other hand, he did not hesitate to oppose Stoic doctrines, for we find him maintaining that "qualities are not corporeal" in direct contravention of Stoic teaching.

Though Galen was a very distinguished physician in his lifetime and attended two emperors, his real fame hardly began till some thirty years after his death. It was owing mainly to the philosophers that his reputation was spread abroad, and it was the philosophical part of his medical system which caused his general acceptance in the succeeding ages. Few thought of imitating the really scientific part of Galen's labours, and giving the same attention to anatomy and physiology which he had given. Thus they accepted without questioning all his anatomical observations, not realizing that his dissections had been made on animals only, and the descriptions taken as applicable directly to the human frame. So strikingly was this the case that when Vesalius in the sixteenth century began to point out some of the errors which had hitherto been implicitly accepted, the ardent defenders of Galen maintained that the structure of the human body must have changed. Massaria of Pavia in the seventeenth century said he would rather err with Galen than be right with any other physician. Thus after his death the inquiring and scientific spirit of Galen retreated more and more into the background among his successors, while his sytematizing, organizing, and, if we may so express it, intellectually bureaucratic spirit came to the front.

It would seem that in the intellectual world no less than in the physical the soil is as important as the seed, and so it came about that the scientific investigations of Galen, falling upon an unfavourable soil, took no deep root and led to no further researches in anatomy and physiology, until the revival of learning at the Renaissance stimulated men's minds afresh to the original pursuit of truth. On the other hand, his philosophical speculations seemed to harmonize with the requirements of his age. For that age felt the want of authority in matters intellectual no less than in matters political. In the world of politics men had grown weary of the civil wars and party strife, which, beginning with the struggle between Marius and Sulla, continued on between Pompey and Caesar, had been only finally brought to an end by the battle of Actium (B.C. 31). Power then gravitated more and more into the hands of one man, and the people loved to have it so. Similarly in the intellectual sphere the barren strife of rival philosophic schools, more intent upon verbal triumphs than the solid acquisition of knowledge, produced a feeling of weariness and exhaustion which was ready to welcome with open arms any co-ordinating, authoritative system of knowledge, and it was just such a system which Galen was well able to supply. Probably for the time being this constituted an advance in both the intellectual and political worlds; at least it gave time for the confused and shattered forces to recuperate themselves. But in the long run such centralizing systems, except as temporary bulwarks against political or intellectual anarchy, can never be very favourable to human progress. For the firm domination of a central authority in matters intellectual dries up the springs of original thought just as it paralyses in the political world the initiative and native vigour of the average citizen, and consequently we get an unprogressive and unilluminating period in the history of civilization. Even with a sage upon the imperial throne and the central government devoted to the good of the people, yet it has been well said that the age of the Antonines was one in which no man of spirit would have wished to live.

Medical knowledge being essentially progressive, systems of medicine can never be permanent, but are of course useful as gathering together our knowledge and providing a sound basis from which further scientific advance can be made. The astonishing thing about the medical system of Galen lies in the fact that it lasted for such a prodigious length of time, and to this we think the political and intellectual circumstances of the time largely contributed. Progress of any kind has been due to a very small number of races out of the vast family of mankind, and among these few races the actual number of persons who make any serious effort to advance knowledge is exceedingly small, so that there is always a tendency, even among the more intellectually active nations for the effort to be relaxed and the pursuit of knowledge abandoned. To the vast majority of mankind thinking is an extremely difficult and unpleasant process, and anybody who can provide a decent escape from this painful duty will usually find a ready acceptance.

Unconsciously Galen flattered this common instinct of mankind. His was not one of those minds which arouse, fertilize, stimulate, and invigorate the spirits of men ; rather was his the kind of mind which seeks to bar all avenues to further progress by the elaboration of a system. His numerous writings, on which he spared no pains and which were extremely well written, the complete and rounded-off character of his conclusions, which seemed to furnish an answer for every question, a solution for every difficulty, the complicated logical apparatus which accompanied them, together with his vast and grandiose philosophic conceptions, all contributed to give to him an almost papal dignity and infallibility in the mediaeval medical world. Later, too, when the torch of civilization passed to the Arabs, it came among a people peculiarly fitted by their natural temperament and religion for the acceptance of authority ; consequently with them Galen obtained a renewed lease of life. What the people of those ages failed to realize was that medical science must of necessity, as Plato would tell us, be immersed in the particulars of sense, and although philosophy may widen its conceptions and invigorate its tone, no amount of speculation or metaphysical reasoning can be a substitute for the exact and detailed knowledge which is so essential a part of medicine. Just as a man who is navigating an unknown and winding river may profitably ascend from time to time a neighbouring height, and, surveying the surrounding country, take stock of his position and general direction, yet if he does not come down to the river's edge and note each shoal and rapid, current and sandbank, his boat's voyage will be endangered or indefinitely delayed—similarly it is helpful in the sphere of medicine at times to scale with Galen the breezy heights of philosophy and view the position of our art in the light of the economy of the whole universe ; but unless we descend to the particulars and methods of medical science no serious advance will be made, and, like the successors of Galen in the Middle Ages, we shall be tied and bound by the fetters of a philosohical system which, though it may have at first illuminated medicine, eventualy becomes an obstacle to all progress.—The *British Medical Journal,* November 7, 1908.

R. O. MOON, M.D.

Acknowledgments.

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चरकसंहिता ।

That alone is the right medicine which can remove disease:
He alone is the true physician who can restore health.
Charaka Sanhitá.

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